Law Reform Commission of Canada
Commission de réforme du droit du Canada

PROTECTION OF LIFE

# crimes against the environment

Working Paper 44

Canada

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# CRIMES AGAINST THE ENVIRONMENT

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Law Reform Commission
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Working Paper 44

# CRIMES AGAINST THE ENVIRONMENT

1985

# Notice

This Working Paper presents the views of the Commission at this time. The Commission's final views will be presented later in its Report to the Minister of Justice and Parliament, when the Commission has taken into account comments received in the meantime from the public.

The Commission would be grateful, therefore, if all comments could be sent in writing to:

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# INTRODUCTION

## Background, Scope and Rationale

This Working Paper has been in progress for several years, and is in fact its fourth draft. It has been more extensively consulted upon than most Commission Working Papers in their prepublication stage. Given the novel, urgent and in some respects controversial nature of its proposal, this expenditure of time and the wide consultations were quite deliberate on the Commission's part. There was a clear need to test our hypotheses carefully and to tap the experience and perceptions of a wide range of interests and expertise. Among those whose comments and reactions we sought and who provided them willingly (often in some detail) were: judges, members of environmental interest groups, members of various industries and industrial associations, law professors and other academics, members of various federal and provincial environment agencies, defence lawyers and law enforcement officers.

Some of these consultations were done in the context of the meetings the Commission regularly has on a continuing basis with five key groups who consider our work in the field of criminal law.[1] As well, many other information/consultation meetings were held, and drafts of the Paper were widely distributed to readers in all parts of the country for their comments. A partial list of those who assisted us in this manner can be found in Appendix II.

Those consultations in various forms proved to be of invaluable assistance to the progress of this Working Paper. On many points, those who responded to earlier drafts only during meetings or in writing tended to agree with our tentative analysis and conclusions; at the same time they suggested many revisions and improvements, a large number of which have been incorporated into this present Paper. We cannot claim that there was a unanimous endorsement of our proposal to add a new offence of a "crime against the environment" to the *Criminal Code*. However, there was wide support for doing so by, for example, our advisory panel of judges, the law teachers group, and many of those readers to whom we sent drafts. As for particular aspects of the proposals, many judges and others fully endorsed the advisability of a generally worded formulation for the new offence (see below, Chapter One, V. C.), and agreed that the flagrant and dramatic violation of federal or provincial environmental statutes and emission standards should be a necessary condition for criminal liability under the proposed new *Code* offence (see below, Chapter One, II. D.). There was also widespread agreement with

1. Those five groups are: a panel of judges; a delegation of defence lawyers nominated by the Canadian Bar Association; a group of chiefs of police; a group of law teachers selected by the Canadian Association of Law Teachers; and a group of Crown counsel for federal and provincial governments.

our tentative view that procedural reforms such as reverse onus and prosecutorial discovery of the accused, when applied to environmental offences, may violate the rights of the accused (see below, Chapter One, IV. B.). Finally, there was considerable support for the conclusion in Chapter Two, that existing *Code* offences and prohibitions do not prohibit, with enough directness and explicitness, serious harm and endangerment to the environment, and that it would not be advisable to revise them to accomplish that goal. The preferred approach is that of formulating a new and special offence of a "crime against the environment."

The present *Criminal Code* in effect prohibits offences against persons and property. It does not, in any explicit or direct manner, prohibit offences against the natural environment itself. In this Working Paper, the Commission makes and supports the proposition that the natural environment should now become an interest explicitly protectable in some cases in the *Criminal Code*. Some acts or omissions seriously harmful or endangering to the environment should, if they meet the various tests of a real crime, be characterized and prohibited for what they really are in the first instance, crimes against the environment.

Especially since the Ouimet Report of 1969 [2] there has been developing in Canada a new thrust for criminal law reform, one involving a desire to clarify its purposes, reduce its scope and restrain recourse to it. This aim of clarification, reduction and restraint has been a major goal of the Law Reform Commission of Canada since its establishment in 1970. In all its criminal law analyses and proposals, a constant theme is that one of the paths to that clarification and fundamental reform is to shorten the excessively long arm of the criminal law. For example, in *Our Criminal Law* we read:

> Our basic recommendation, then, is that in all these four aspects — ambit, responsibility, procedure and sentencing — the watchword must be restraint.[3]

Five tests or at least signposts were proposed in that same Report by which to determine whether or not a particular offence should continue to be classified and prohibited as a real crime or reduced to the status of a regulatory offence.[4] Offences should be considered real crimes only if: they contravene a fundamental value; they are seriously harmful; they are committed with the required mental element; the needed enforcement measures would not themselves contravene fundamental values; and treating them as crimes would make a significant contribution to dealing with the harms and risks they create.

Applying these tests to instances of pollution provides a clear restraint and safeguard against any danger of transforming *all* pollution offences into *Code* crimes. Clearly most pollution offences are best characterized and treated as regulatory offences, controlled

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2. Canadian Committee on Corrections, *Report of the Canadian Committee on Corrections — Toward Unity: Criminal Justice and Corrections*, Roger Ouimet, Chairman (Ottawa: Information Canada, 1969).

3. Law Reform Commission of Canada, *Our Criminal Law*, [Report 3] (Ottawa: Information Canada, 1976), p. 31.

4. Similar tests were more recently proposed by the Government of Canada in: *The Criminal Law in Canadian Society* (Ottawa: Government of Canada, 1982).

by relevant federal and provincial environmental statutes. Most such violations would probably fail one or more of the tests of criminality listed above, as they are more in the nature of careless or negligent acts or omissions done in the course of otherwise legitimate activities, without causing any serious harm or danger.

Restraint in the recourse to criminal law is only one facet of the Commission's mandate to remove anachronisms and anomalies in the law, and to develop new approaches to and concepts of the law in keeping with, and responsive to, the changing needs of Canadian society.[5] It has always been understood by the Commission that the changing needs and perceptions of Canadian society may also urge additions to the *Criminal Code* of offences not presently prohibited by it, at least not directly and explicitly enough. The same tests which should lead to some *Code* offences being removed from the *Code* because (for example) they are no longer perceived as serious threats to our fundamental values, also lead us to conclude that some offences not presently found in the *Code* should be added to it. Some of the latter might involve activities not possible or foreseeable at the level of societal, institutional or technological development when the *Criminal Code* was enacted. Others might involve activities which, at that time, were not perceived to be contraventions of our fundamental values, but now are. It is our contention in this Working Paper that some serious instances of environmental pollution meet both of these criteria.

The possibility of expanding, and not just reducing, the *Criminal Code* was allowed for in the Commission's Report, *Our Criminal Law*. In discussing theft as the paradigm of crime in Western societies (given the value we place on private ownership), that Report noted:

> Sometimes, however, paradigms need changing. Pollution, depletion of resources, poverty, unemployment, inflation, race conflicts, terrorism, alienation — all these throw doubts on the adequacy of our older criminal law paradigm.[6]

The more recent government policy paper on criminal law, *The Criminal Law in Canadian Society*, made a similar observation, one of direct relevance to serious pollution offences:

> There is no question that the only adequate and fitting response to such "core" crimes as murder, assault, robbery and so on is the criminal law. No one seriously suggests otherwise. For other new, sophisticated and potentially harmful activities — especially those of large-scale organizations — use of the criminal law may also be appropriate in some circumstances, in light of the increased dependence of individuals on such organizations with respect to crucial aspects of everyday existence and, therefore, the increased vulnerability of individuals to harmful actions on the part of such organizations.[7]

A fundamental premise in this Working Paper is, therefore, that it would be simplistic and out of step with present-day perceptions to characterize *all* pollution offences as only and always regulatory or "quasi-criminal" in nature. In terms of harm done,

5. See the *Law Reform Commission Act*, R.S.C. 1970 (1st Supp.), c. 23.
6. *Supra*, note 3, p. 21.
7. *Supra*, note 4, pp. 41-2.

risks caused, degree of intent and values threatened, environmental pollution spans a continuum from minor to catastrophic; from what is harmless, to what is tolerable if controlled in view of various societal benefits thereby achieved, to what is intolerable and deserving of social abhorrence and denunciation; from what is only accidental, careless or negligent, to what is grossly negligent, reckless or intentional.

That wide range regarding harm, values threatened and degree of intent calls for a similar range of legal controls and responses. In this Working Paper, the focus is on those pollution activities at the most serious end of the scale, those which in the view of this Commission, merit the most severe societal deterrence, repudiation and sanction available, namely, that provided by their clear and explicit prohibition in the *Criminal Code*. The problems addressed are those of: determining at what point on the pollution continuum these offences should be considered real crimes; deciding what the essential elements of environmental crimes should be; and demonstrating that their prohibition fulfils an urgent need which cannot otherwise be met.

It must be emphasized at this point that no claim will be made that the explicit prohibition by the *Criminal Code* of some pollution activity will provide in one stroke the solution to all pollution problems. In fact it is almost certain that from a practical and long-range point of view, a number of other existing and evolving legal and administrative approaches, controls and incentives, especially those focused on prevention and compliance, will do much more to limit and lessen pollution than will recourse to the *Criminal Code*. It should also be acknowledged that what will count far more towards environmental protection than *any* law reform, criminal or otherwise, is an increasingly informed and environmentally sensitive public combined with an evolution in economic and political priorities.

The reform defended and proposed in this Working Paper should not involve any encroachment upon or limitation in the scope of existing environmental statutes, federal or provincial, or of the agencies which administer those statutes. On the contrary, as will be further explained below, that reform is intended only to provide for a need not generally thought to be within the scope of regulatory statutes and mechanisms. Far from limiting the scope of environmental agencies, it is intended that the explicit prohibition, in the *Criminal Code*, of some acts or omissions seriously harmful or endangering to the environment, will provide those agencies with an important additional tool.

There are three chapters in this Working Paper. Chapter One applies the tests of "real" or *Code* crimes[8] to seriously harmful or endangering environmental pollution, and concludes that some pollution conduct does indeed meet the criteria. A major goal of this chapter is that of identifying with as much precision as possible the elements, scope and limits of what will be referred to as "crimes against the environment."

8. The Commission proposed already in its earliest Working Papers and Reports that "real" crimes and *Code* crimes should, in effect, be synonymous. That is, only those offences which meet the tests applied in Chapter One should be retained in, or added to, the *Criminal Code*. See for example the 1976 Report, *supra*, note 3.

However, if some acts or omissions of environmental pollution should indeed be considered real crimes, and be prohibited by the *Criminal Code*, do some existing sections of the *Code* already adequately prohibit them? That is the question addressed in Chapter Two. It will be concluded that they do not. The interests they protect are human life or health and property, but not, in any direct or explicit manner, the natural environment. The revision of one or more of those existing offences, nuisance or mischief for example, explicitly to include environmental crimes within their scope, remains one reform solution. Our preferred choice is that of a new *Criminal Code* prohibition explicitly and exclusively prohibiting crimes against the environment. Chapter Two concludes by demonstrating that the criminalizing of serious pollution and the addition to criminal codes of new offences explicitly prohibiting it are not without precedent. A number of countries have already done so.

Chapter Three will provide, in the form of specific recommendations, a sketch of the essential elements of the new *Code* offence of a crime against the environment. It will be left to the next stage of the Commission's work on this issue to draft the offence in formal legislative style and language. For the time being, the Commission's concern is to indicate the major parameters and elements it proposes for this new offence, and to invite comments and criticisms from all interested parties. The fine lines and legislative drafting can best be drawn at the next stage, in the light of comments received and further reflection by the Commission.

Earlier drafts of this Working Paper contained detailed treatment of the evidentiary issues which could arise in the prosecution of crimes against the environment. Two possible reforms of a procedural nature were studied and evaluated — those of reverse onus and prosecutorial discovery of the accused. We were by no means convinced that they were justified, but because they are sometimes proposed as ways of meeting the problems of proof, they therefore merited inclusion for consultation purposes in our prepublication drafts. Those consultations further convinced us that there are serious obstacles to such potential reforms applied to *Criminal Code* offences. Given the rigorous standard and burden of proof in criminal cases, it has been suggested, for instance, that when serious harm or risk to the environment and human health is at issue, both prosecutorial discovery of the accused and reversing the onus of proof should be permitted. However, both approaches raise serious problems regarding the rights of the accused, especially in the light of the *Canadian Charter of Rights and Freedoms*.[9] Since the issues of burdens and standards of proof are subjects being explored in some depth by one of the Commission's criminal law projects, it would be premature to raise them in detail or attempt to resolve them in this Paper. For the time being, the Commission is not persuaded that such drastic procedural exceptions are justified in the context of the new offence being proposed in this Working Paper. The evidentiary burdens involved in this new *Code* offence are very real and will clearly contribute to limiting the number

9. *Canadian Charter of Rights and Freedoms*, *Constitution Act, 1982*, as enacted by the *Canada Act 1982* (U.K.), c. 11. See on this point, *infra*, Chapter One (IV. The Enforcement Test: Respecting the Rights of the Accused).

of prosecutions and convictions for that offence. However, that is so for other *Code* offences as well, and does not in our view argue against its creation. Shifting the onus presently on regulators and plaintiffs to prove harm, to the regulated and defendants to prove safety in the context of regulatory statutes and civil cases, is of course quite another matter. There are already precedents for such a shift, and arguments for expanding the scope of reverse onus in those contexts merit serious consideration.[10]

A final word of caution is in order. The reader should not expect to find in this Working Paper full details regarding the data used, arguments made or sources drawn upon. As are other Working Papers by this Commission, it is somewhat summary in nature. On many points, it is dependent upon other related Study Papers and Working Papers from the Protection of Life Series and from other Commission projects. Those other Commission Study Papers and Working Papers of particular relevance to this Working Paper are provided in Appendix I. Many other written sources were of great assistance as well, only the most important of which are included in the references. Many individuals and groups provided invaluable advice and comments, in most cases by reacting informally to earlier drafts of this Paper. They are identified in Appendix II.

10. *Ibid.*

# CHAPTER ONE

## Applying the Tests of Real Crime to Environmental Pollution

This chapter is a particular instance of what *The Criminal Law in Canadian Society* identified as "... the need to examine some forms of conduct, not presently dealt with as criminal, with a view to assessing the advisability of treating them as criminal."[11] It should be noted at the outset that neither in *Our Criminal Law*, nor in *The Criminal Law in Canadian Society* were the similar tests of criminality proposed meant to be strict rules to be applied literally as the last word in every respect. They were meant rather to provide signposts or guidelines, and therefore were left somewhat general in formulation. Nevertheless, the five general tests or criteria of criminality to be applied here are of great and lasting value. We turn now to the first of these, the contravention of a fundamental value.

### I. The Contravention of a Fundamental Value: A Safe Environment

Just as the tests of criminality themselves are not written in stone, neither in every case is the boundary line between environmental pollution which should incur a response and sanction in the *Criminal Code* as most deserving of societal repudiation, and pollution which is more properly and effectively controlled by regulatory statutes and administrative sanctions. It has been rightly observed about the distinction between crimes and regulatory offences that:

> These boundaries will always be indistinct, and the definition of the boundary in respect to a specific issue, a particular form of conduct seen as posing a social problem, will always be subject to dispute and the application of the individual judgment of Canadians and, more particularly, Parliamentarians, whose collective decision it is to call an act a "crime" or not.[12]

An additional point should be made as well. Such decisions by legislators or proposals by law reformers should clearly not be a reflection only of the personal morality and preferences of some individuals, or merely responses to the political pressures and perceptions of the moment. Something more is required, namely a coherent

11. *Supra*, note 4, p. 43.

12. *Ibid.*

philosophy of criminal law, one which gives a high priority to determining whether the conduct in question seriously contravenes what is widely acknowledged to be, and ethically defensible as, a fundamental value in our society. It is the view of this Commission that a fundamental and widely shared value is indeed seriously contravened by some environmental pollution, a value which we will refer to as the *right to a safe environment*.

To some extent, this right and value appears to be new and emerging, but in part because it is an extension of existing and very traditional rights and values already protected by criminal law, its presence and shape even now are largely discernible. Among the new strands of this fundamental value are, it may be argued, those such as *quality of life*, and *stewardship* of the natural environment. At the same time, traditional values as well have simply expanded and evolved to include the environment now as an area and interest of direct and primary concern. Among these values fundamental to the purposes and protections of criminal law are the *sanctity of life*, the *inviolability and integrity of persons*, and the *protection of human life and health*. It is increasingly understood that certain forms and degrees of environmental pollution can directly or indirectly, sooner or later, seriously harm or endanger human life and human health.

## A. "Environmental Rights": The Options

An indispensable task in exploring and justifying our proposal to add environmental crimes to the *Criminal Code* is that of determining, with as much precision as possible, the particular value and interest legitimately within the scope of criminal law protection. There can, in other words, be a number of reasons why one might wish to make serious harm or danger to the environment a crime. But it does not follow that each reason has the same weight, or that each of the interests in mind equally merit the involvement of criminal law. The principle of restraint in the use of criminal law obliges us not to extend its already wide scope, except to include identifiable and deserving targets.

Expressed very broadly and in terms of environmental rights, there are potentially five related but different levels of "environmental rights" one might wish to enshrine in law, and corresponding activities one may wish the law to prohibit:

(1) *A right not to have one's life or health harmed or endangered as a result of environmental pollution, the health effects of which are known, predictable, serious and relatively immediate.*

In effect this category can be thought of as an extension and application of the more general right and interest already the primary focus of the *Criminal Code* — that of physical integrity and security.

(2) *A right to a reasonable level of environmental quality, even when a specific pollutant or pollution source cannot now be identified with certainty as the cause of specific health damage or risk, on the grounds that sooner or later serious pollution of the environment will threaten human life and health as well.*

Although the right in this case would be to environmental quality, the ultimate concern and basis, as in the first category, is human health. Unlike the first category, however, its scope would extend beyond just those instances of pollution with known, predictable and serious dangers to human life and health, to include all instances of serious environmental pollution. Proponents of this view would and do argue that, in the long run, to badly damage particular aspects of the natural environment, especially in an irreversible manner, may do serious harm to human health — if not to those now living, then to those in a future generation; in other words that, from an ecological perspective, there is no discontinuity between serious environmental harm and harm to the health of humans in general. Because of that risk, the law should directly prohibit all pollution which seriously harms or endangers environmental quality. This level and category of right does not assume or promote victimless crimes. Rather, it assumes that there will be specific and identifiable victims; it is simply that we do not yet know their identity or the particular form of their victimization.

(3) *A right to a reasonable level of environmental quality, but one which is violated by pollution instances which deprive people of the use and enjoyment of the environment, even when there are no health effects or dangers.*

This right and category differs from the previous two in that the interest underlying the right is not the protection of human life or health, but a wide range of uses of the natural environment and natural resources which can be seriously interfered with by pollution ranging from noise to toxic contamination. These amenity considerations could range from a dirty (but not unhealthy) river, to the inability to exploit a particular natural resource for commercial purposes because of pollution damage. The fundamental question which must be faced in this regard is whether the scope of criminal law should be extended into the environmental arena to protect amenity rights alone, when there are no significant human health implications. Important rights can, of course, be infringed in both cases, and various branches of law other than criminal already are involved in protecting, for various purposes, the use and enjoyment of the environment; but the case for involving the *criminal* law would appear to be much stronger when claims to the use and enjoyment of the environment also involve direct or indirect health risks. In other words, the emission of very large quantities of highly carcinogenic or mutagenic compounds into city air would appear to constitute a much more serious and hence potentially criminal infringement of environmental rights than the emission of pollutants making a river objectionable to swim in, but not unhealthy.

(4) *A right of the environment to be protected from serious pollution for its own sake, even if pollution incidents should result in no direct or indirect risk or harm to human health or limitation upon the use and enjoyment of nature.*

The previous three categories permit the focus upon, and protection of, the environment *itself*, although ultimately for the sake of human life, human health, and the use and enjoyment of the environment by humans. However, this last right would protect the environment *for its own sake*, quite apart from health or amenity considerations. From this perspective, it is the environment which should have various rights, not people who should have environmental rights. The implications of environmental pollution for humans would be quite incidental to this right. The extension of criminal law protection to encompass the first three rights could be considered *evolutionary* (although not necessarily justifiable in each case). However, for the criminal law, or law generally for that matter, to acknowledge this fourth category and right in the strict and literal sense would be truly *revolutionary*. It would be, in effect, to assign rights to nonhuman entities, and it has always been thought that only humans can have rights. Interesting and tempting though it may be to do so, efforts to argue that case have so far not been met with anything approaching general support, whether in philosophical or legal thinking. Some very real conceptual problems stand in the way of such efforts.[13] In our view, there are more than adequate grounds for more rigorous environmental protection right now, whether or not nonhuman entities are granted legal rights at some future date.

(5) *A right to have one's private property protected from damage by pollution caused by others.*

It is doubtful in our view that this new environmental crime should include within its scope pollution which only damages or endangers the private property of others. The implications of some pollution for private property can be very serious; but when there are no serious dangers to human health or to the environment itself as well, what is at issue is not environmental rights, but (private) property rights. To include property considerations as a direct and exclusive object of this new crime against the environment would be to blunt its focus and diffuse its effect. It is in part at least to focus clearly on the environment itself as opposed to (private) property that this new environmental crime is being proposed. When only private property is harmed or endangered by pollution, the more direct and effective legal routes would seem to be the civil route or prosecutions for crimes against property.

A number of signs exist that there is a real and expanding concern for environmental protection: on the part of the general public; in the evolution of various legal concepts proposed to respond more adequately to environmental threats; and in the positions of environmentalists themselves. It would be too much to claim that there is yet a single and definable "environmental ethic" in place, or that its directions and implications are as yet clear or equally compelling to everyone or that all these concerns and proposals are equally persuasive. However, there is at least ample evidence that

13. See generally on this approach, C.D. Stone, "Should Trees Have Standing? — Toward Legal Rights for Natural Objects" (1972), 45 *Southern California Law Review* 450; L.H. Tribe, "Ways Not to Think about Plastic Trees: New Foundations for Environmental Law" (1974), 83 *Yale Law Journal* 1315; D.P. Emond, "Co-operation in Nature: A New Foundation for Environmental Law" (1984), 22 *Osgoode Hall Law Journal* 323.

there is a widespread and growing commitment to a safe environment. Considering those signs briefly at this point will assist us in drawing some firmer conclusions about the five options just described, as regards the appropriateness or inappropriateness of criminal law.

## B. Public Concerns and Pressures

If it ever was true that only the "lunatic fringe" was concerned about environmental protection, that is certainly not so in our times. For example, a 1978 national survey found that eighty-nine per cent of Canadians consider deterioration of the environment to be a major concern.[14] A 1982 survey of Edmonton residents indicated that seventy per cent of respondents favoured enforcement of air pollution standards, eighty-eight per cent supported the prosecution of polluting industries, and seventy per cent supported more rigorous enforcement of environmental statutes even if it led to higher prices.[15] More recently, another social policy research group reported that environmental health concerns are consistently in the top ten issues of concern to Canadians, and that most Canadians do not see environmental health and safety as a luxury to be traded for jobs or other values.[16]

Another indication of public concern is the strong desire for public participation in various aspects of environmental policy making. Particularly when the policy under consideration is perceived to have a *local* environmental and health impact, the interest and participation are at a very high level. The public is increasingly insistent that the opportunity to participate be provided when it presently is not. Among such occasions are, for example, hearings to select a waste disposal, treatment or storage site, or hearings to deal with the environmental impact of a proposed industry, or efforts of the public to obtain information about a potential environmental hazard.

There is, in some jurisdictions, an increasing resort to the prosecution of alleged polluters by various environmental agencies under the offence sections of their regulatory statutes. One of the reasons for this appears to be a pervasive pattern of noncompliance with administrative requirements by some regulated industries. But it has been argued that another related reason is the growing political profile of environmental issues, resulting in part from a greatly increased public awareness of actual or potential environmental abuses.

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14. The study was done for Environment Canada by the Centre de recherche d'opinion publique (CROP).

15. See "Environmental Issues in Alberta: The Opinions of Edmonton Residents," *RMD Report*, 82/17.

16. See "Canada Considers Legislation to Protect Quality of Water," *The Globe and Mail*, February 7, 1984. A 1985 poll of Canadian attitudes to the acid rain problem reported that seventy-five per cent of Canadians feel that their governments are doing little or nothing to solve the problem. The same newspaper article reported that a 1985 Harris Poll in the United States found that awareness of acid rain pollution has "soared to 94 percent from 30 in the past five years and a majority of the population wants to see polluters pay for the clean-up." See "Acid-Rain Awareness up to 94%, U.S. Poll Shows," *The Globe and Mail*, May 13, 1985, p. 11.

## C. The Public Trust Doctrine, Environmental Quality and Bills of Environmental Rights

Another strand of an environmental ethic given increased attention in our times is the notion of "public trust" applied to environmental rights and duties. That notion is contributing to an evolution in our concept of private ownership. At present, most environmental protection legislation in Canada gives governments (through their environmental agencies) only a discretionary role *vis-à-vis* protection of the environment. That is, it *may* apply and enforce the legislation, but it *need not*. There are few obligations imposed on those who administer statutes.

However, the emerging public trust notion would impose duties to manage and use resources *in trust* for the public. It is already generally accepted that *governments* have public trust duties, in that land and resources owned by the government cannot be disposed of to private interests without taking into account the broad public interest. However, many argue that this notion should be applied to business as well, and to the land resources they own. While industries and developers would continue to be allowed the reasonable use of resources they own, their ownership and use would be qualified by their "public trustee" responsibilities.[17] Involved in this notion is in effect an evolution in our concept of ownership. The right to the private ownership and use of its land and resources by an industry would not be denied, but a new dimension would be added. That new dimension would be a responsibility to use it not only for private gain but also in the light of the common good. Consideration of the common good and the public heritage dimension of privately owned land and resources would rule out, for example, disposal of one's industrial wastes in ways likely to create public harm or risk.

This general notion of a dimension of common ownership is not in reality entirely new to law. It is only being rediscovered in our times. It was already expressed in the Institutes of Justinian:

> By natural law the following things belong to all men, namely: air, running water, the sea, and for this reason the shores of the sea.[18]

The concept of public trust — of the environment as a public heritage — is one of the foundations of efforts on many fronts in recent years to establish environmental Bills of Rights. Between 1976 and 1981 alone, a number of such Bills were proposed

17. One of the strongest and earliest proponents of the relevance of this doctrine to environmental protection was Joseph Sax. See his *Defending the Environment: A Strategy for Citizen Action* (New York: Alfred A. Knopf, 1971). See also Constance D. Hunt, "The Public Trust Doctrine in Canada," in John Swaigen, ed., *Environmental Rights in Canada* (Toronto: Butterworths, 1981), pp. 151-94. A related approach encouraged by many argues for a new substantive right to environmental quality which could be enforced by government or any member of the public against business, or by any member of the public against the government. See John Swaigen and Richard Woods, "A Substantive Right to Environmental Quality," in *Environmental Rights in Canada*, *supra*, pp. 195-241.

18. Institutes of Justinian, Book II, Title I, para. 1, in *The Civil Law*, a translation by S.P. Scott (Cincinnati: The Central Trust Company, 1932), vol. 2, p. 33.

or introduced - in Alberta, Ontario, Saskatchewan and in the federal Parliament (by the then Minister of the Environment). As well, a proposal was made to the Parliamentary Joint Committee on the Constitution in 1980 to enshrine in the new Constitution a clause committing both levels of government to protecting the environment.[19] While none of these proposals have yet been successful in the strict legislative sense, their mere introduction and the not inconsiderable support for them are at least important signs of the priority many today give to environmental quality.

An example of an enactment which incorporated some of the major aspects of an environmental rights perspective was Michigan's 1970 *Environmental Protection Act*. It recognized the concept of public trust and placed a duty on the government agency, as well as businesses and developers which own natural resources, to protect them from pollution and degradation. It went a considerable distance towards providing citizens with a right to environmental quality — a right to a clean and healthy environment — by authorizing government agencies and others to "provide for actions for declaratory and equitable relief for protection of the air, water and other natural resources and the public trust therein."[20]

A related and equally central element in these Bills of Rights is that, in one form or another, they seek to shift at least some of the burden of proof from the plaintiff and Crown to the defendant and accused. Not only would a plaintiff, for example, not have to claim *personal* injury to have standing to bring an environmental action before a court, but if the activity complained of could be shown to endanger the environment, then the burden would shift to the alleged polluter to establish the safety of that activity.

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19. In Alberta, the Leader of the Opposition introduced a private member's Bill in the Alberta Legislative Assembly in 1978 and again in 1979. The Bill was entitled "The Environmental Bill of Rights" (Bill 222, 19th Legislature, 1st Session), but it was blocked by the government without debate. A more comprehensive private member's Bill was that introduced by the Leader of the Opposition in the Ontario legislature in 1979. Entitled "The Ontario Environmental Rights Act" (Bill 185, 1979, 31st Legislature, 3rd Session), it was briefly debated but also defeated. In 1980, the Ontario New Democratic Party introduced its own Bill entitled "The Environmental Magna Carta Act" (Bill 91, 31st Legislature, 4th Session). It died on the Order Paper without debate. In 1978, the federal government introduced a Bill to amend the Constitution of Canada (Bill C-60, "An Act to Amend the Constitution of Canada," 30th Parliament, 3rd Session, tabled June 20, 1978). The 1980 proposal to the Parliamentary Joint Committee on the Constitution (by Aird and Love) would have committed the federal and provincial governments to "advancing the management and use of Canada's natural resources to meet the needs of society in perpetuity." See Aird and Love, "Enshrine Resources in a New Constitution," *The Globe and Mail*, July 25, 1980, p. 7. See also G. Mains, "Some Environmental Aspects of a New Canadian Constitution" (1980), 9 *Alternatives* 14.

    The Canadian Environmental Law Association (CELA) also made a brief to the same Joint Committee arguing among other things for a commitment from the government to the preservation of environmental quality across Canada. The Canadian Environmental Law Research Foundation (CELRF) also proposed an "Environmental Bill of Rights" in David Estrin and John Swaigen, eds., *Environment on Trial*, rev. ed. (Toronto: CELA and CELRF, 1978), pp. 458-81, in which it maintained at page 458 that "[l]ike freedom of speech, freedom of religion, and other basic civil rights, *environmental quality should be recognized by law as an inalienable right*, for without an environment capable of supporting the human race, all other rights are useless."

20. *Environmental Protection Act* (Michigan), Public Law 127 of 1970.

## D. From a "Homocentric" to an "Ecocentric" Ethic

A number of commentators have observed that the dominant environmental ethic both politically and intellectually until about the 1960s envisaged humans at the centre of the universe. Generally speaking that view made two assumptions as a result: that humans have dominion over all other forms of life and inanimate entities; and that we could and would make perpetually greater demands on the natural environment by way of production, consumption and waste.[21] To a large extent, that "mankind at the centre" perspective characterized as well the arguments and positions of those pushing for a safer and cleaner environment. What counted as the measure of defensible environmental policies was the value of the environment to us — the need to protect it because it is indispensable to the satisfaction of human needs and desires. That view also fueled the environmental legislation in the United States and Canada. Harm to the environment was to be avoided and controlled, implicitly because we humans would otherwise be affected in some manner; continuing and expanding resource consumption and production would be constrained, our enjoyment of nature curtailed, and our health put at risk.

However, more recently environmentalists and others have underlined what they see as some serious limitations of that homocentric or "mankind at the centre" perspective, and many have promoted instead an ecocentric or "environment at the centre" stance. They claim, for instance, that the older view was wrong to assume that we could have adequate environmental protection at no cost to our appetites, desires or life-styles — that we could continue and expand production, consumption and waste and at the same time have a safe and clean environment — that nature is infinitely resilient and flexible. They now argue that there are always costs, some payable now, some later, that some resources are not renewable, and that there are thresholds and limits to what can be used and destroyed in the environment and each ecosystem. They maintain that there is a balance, harmony and interdependence in nature to be protected and respected for its own sake.

Some environmentalists also argue that, pushed to its logical conclusion, a policy of environmental protection based only on *human* goals and rights could progressively weaken claims for the protection of endangered aspects of the environment, the pollution or destruction of which would not constitute economic or aesthetic loss, or danger to human health. Some fear that as our capacity increases to supply by artificial means those human needs and desires now supplied by the natural environment, the checklist of those forms of life and inanimate entities in nature which we deem worthy of protecting would progressively shrink.

To some extent then, these and similar views constitute a shift away from a largely homocentric to an ecocentric ethic, one which in effect seeks the protection of the environment *for its own sake*, quite apart from its relevance to humans. There are, of

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21. See, for example, N. Morse and D.A. Chant, *An Environmental Ethic: Its Formulation and Implications* (Ottawa: Canadian Environmental Advisory Council, 1975); R. Cahn, *Footprints on the Planet: A Search for an Environmental Ethic* (New York: Universe Books, 1978).

course, many important and laudable insights provided by proponents of this more recent stage of environmental concerns. At the very least, they further demonstrate that the environment itself in the view of many ought to be a legally protectable interest; but, as already suggested above, there remain some serious conceptual and practical obstacles to the provision of legal protection to the natural environment *for its own sake*, apart from considerations of human benefits, wishes, uses and health risks. It would amount to granting rights to nonhuman entities. From a practical standpoint, it is inconceivable that natural resources could ever be totally insulated from economic and political considerations. Nor is it evident that we cannot provide adequate protection for the natural environment itself by continuing to permit a homocentric ethic to underlie our environmental regulations and laws, but one which now gives more scope to the *quality* of human life, and to our responsibility of *stewardship* or trusteeship over the natural environment.

## E. Conclusions

In view of the preceding analyses about fundamental values and interests, we are now able to make the first of our conclusions. At this point, this first set of conclusions will encompass only the matter of the particular environmental values and interests to which the *Criminal Code* could and should legitimately extend. The five options in this regard were described above (pages 8 to 11). These conclusions will of course need supplementing and clarifying by the analyses, additional criteria and conclusion to follow in the remainder of this Working Paper. What we conclude at this point in the Paper is not meant to prejudge the question of whether pollution should be prohibited by the *Criminal Code*, either by the use of exisiting sections or by new ones formulated explicitly for that purpose. A final conclusion on that point can only be made after we weigh all the evidence to be considered in Chapters One and Two.

1. The scope of a *Criminal Code* offence against the environment should not extend to protecting the natural environment for its own sake, apart from human values, rights and interests.

2. However, a fundamental value is seriously contravened by some instances of environmental pollution, one which can be characterized as the right to a safe environment, or the right to a reasonable level of environmental quality.

3. This value may not as yet be fully emerged or universally acknowledged, but its existence and shape are already largely discernible. In protecting it, the *Criminal Code* would be essentially reflecting public perceptions and expanding values traditionally underlined in the *Code* — the sanctity of life, the integrity of persons, and the centrality of human life and health. At the same time, the *Criminal Code* would be playing an educative and advocacy role by clearly articulating environmental concerns and dangers not always perceived as such, and by incorporating newer concerns such as quality of life and stewardship of the natural environment.

4. More specifically, the scope of a *Criminal Code* pollution offence should extend to prohibiting environmental pollution which seriously damages or endangers the *quality of the environment*, and thereby seriously harms or endangers *human life or health*.

5. The pollution activities prohibited by a *Code* offence should include not only those which are presently known to constitute immediate and certain health harms or risks, but also those *likely* to cause serious harm to human health in the foreseeable future.

6. The scope of a *Criminal Code* pollution offence should not normally extend to prohibiting pollution which deprives others of the *use and enjoyment* of a natural resource but causes no serious present or likely harm or risks to human health. Only by express exception should an interest other than life or health fall within the scope of such an offence. Such an exception would be, for example, when a form of pollution would deprive an entire community of its livelihood.

7. Environmental pollution which destroys or damages *private property* without, as a result, causing or risking serious harm to human life or health, should not fall within the scope of a *Code* offence against the environment, but should be the object of civil remedies or prosecuted as a crime against property.

## II. Seriously Harmful or Endangering Conduct

This Commission has long insisted that the criminal law and the *Criminal Code* should only prohibit acts which *seriously* harm or endanger other people. We have already dealt briefly with one aspect of the serious harm or threat caused by some pollution instances — the contravention of fundamental societal values. In this next section, the focus will be on the grave physical harm and danger which can be inflicted on the environment and thereby on various interests of many people, especially that of bodily integrity or health. Of particular concern will be the means and criteria by which we can, in practice, distinguish "serious" pollution harm and risk from that which is "minor."

### A. Some Sources of Pollution Harms and Catastrophes

In instances of pollution at or approaching the level of an *environmental catastrophe*, the "seriously harmful" test will normally be met without the need to inquire whether other "socially useful" goals could characterize the harm or danger involved as tolerable or at least as something less than criminal. In the catastrophic category of events would be those about which there is little or no legitimate scientific or values debate or doubt as to the widespread and very grave nature of the harm resulting. An

example would be the reckless or negligent dumping of a large quantity of highly radioactive waste in a town's source of water. It is impossible to imagine any overriding social goal which could make such conduct tolerable and less than criminal.

It may be useful at the outset to indicate and briefly describe some of the more potentially hazardous pollutants, and the "mechanics" involved in polluting the environment. In so doing, our purpose is only to illustrate the variety of *potentially* harmful materials and activities in our society, not to imply that all uses and releases of those substances are necessarily harmful, dangerous or criminal in nature. As to whether they do serious harm or not, much depends for instance upon how carefully they are manufactured, transported and disposed of, and whether or not they are degradable and cumulative. As to whether the conduct in question is criminal or not, that can only be decided in the light of *all* the tests of criminality, including those to be analyzed in subsequent sections.

In the class of chemical substances alone, more than four million have been identified. Of these, about 70,000 were in common commercial use by 1979, and their number has grown by about 1,000 substances per year; about 1,200 of them are considered dangerous.[22] Many of these toxic substances, in one form or another, are used or emitted in the general environment, in the workplace and in consumer products. Seriously harmful or endangering releases can take place at one or more of various stages — manufacture, transportation, storage, disposal or use by consumers. Though the list which follows generally refers to single substances in isolation, it is increasingly claimed that pollutants can be most harmful in combination with others.

### *Mercury*

Mercury is potentially an environmental, occupational and consumer hazard. It is widely used in the manufacturing sectors of the economy, for example, by the pulp and paper industry. It is estimated that it has about 3,000 commercial uses. It is emitted into the air, water and earth by producers and users. Exposure to low dosages has caused serious neurological abnormalities, as demonstrated in both Japan and Canada. The eating of mercury-contaminated fish has been blamed for abnormalities in Japan and is strongly suspected in the case of Indians in Ontario and Québec. Exposure to high doses is known to cause irreversible neurological disorders, liver and kidney disorders, death, and teratogenic and mutagenic effects. Mercury is therefore not just a serious hazard but a long-term one.

### *Lead*

Lead is widely used in industry, especially the chemical industry. It is particularly dangerous in that it is a cumulative poison and extremely toxic to living organisms. When too much lead accumulates in the body, its disposal system becomes inoperative

22. See Milton C. Weinstein, "Decision-Making for Toxic Substances Control: Cost Effective Information Development for the Control of Environmental Carcinogens" (1979), 27 *Public Policy* 333.

and lead starts to build up in the bloodstream. The organs most exposed to harm from lead-poisoning are the bone marrow, nervous system and kidneys. Too much lead in the bloodstream can cause anaemia by inhibiting the formation of hemoglobin. Very high lead levels in the blood can cause delirium, paralysis, fits and even death. Children are particularly vulnerable to lead-poisoning, especially in the central nervous system. A number of behavioural defects — mental retardation, hyperactivity and aggressiveness have been traced to chronic exposure to low lead concentrations.

### *Polychlorinated Biphenyls (PCBs)*

These are a family of chemical compounds used in a wide variety of commercial products because of their plasticizing, nonweathering and fire retardant properties. One of their most common uses was as insulation in electrical transformers. Though now illegal for such uses owing to their potential as environmental and health hazards, these highly toxic chemicals remain a major or potential hazard, both in products which still contain PCBs and because of unsafe handling and disposal. One of the ways PCBs become a health threat is by leaking, from transformers or dump sites, into the earth or water and thus finding their way into the body via water and the food-chain. They are known to accumulate in the fatty tissues, are almost certainly carcinogenic (although probably not a strong one), have caused birth defects in animals, and are particularly dangerous to women because they could pollute mothers' milk. Given the dangers they represent, one of their most hazardous properties is their resistance to decomposition.

### *Pesticides and Herbicides*

The recent Nova Scotia herbicide case both directed public attention to the potentially serious dangers to environment and health in the use of herbicides, and pointed to some continuing debate as to the degree of danger in certain situations. Nevertheless there is agreement that at certain levels of exposure and concentration and in certain situations, pesticides and herbicides can pose serious dangers to the environment and health. In Ontario in 1979, 70,000 trout were killed when chemicals used to control roadside weeds got into a nearby body of water. In 1981, government researchers found that agricultural and industrial chemicals used in the Prairies were causing significant mutations in animal life. In Alberta in 1979, of eighteen landfill sites examined containing pesticide containers, six were classified as having a high risk of pesticide residue getting into a water system, and four as environmental hazards. Serious human health hazards resulting from use of pesticides and herbicides can include death and many diseases, including Reye's Syndrome. In 1983, a coroner's inquest into the death of a young farm worker in British Columbia led to a jury finding that his pesticide poisoning was a preventable homicide, resulting from the careless use of pesticides and supervision of the workers.

### *Pulp and Paper Mill Effluent*

No industrial activity better illustrates the impact of industrial pollution on water. It has been estimated that all industrial activity in Québec uses five and a half billion litres of water (for cooling, heating, manufacturing and as a means of getting rid of waste). Of that total, the Québec pulp and paper industry alone consumes three billion litres daily. Although pulp and paper pollutants are largely degradable, it has been claimed that the fifty-nine pulp and paper mills in Québec produce more organic pollutants than all the residences of Québec, and that in ecological terms it requires more oxygen to decompose organic pollutants from pulp and paper mills than to decompose all the domestic garbage of the four million people living along the St. Lawrence River. As for inorganic pollutants which can be released into the water by pulp and paper mills, these include mercury, chromium and titanium. The potentially devastating health effects of mercury have been referred to earlier. It should also be noted that the water used and rejected by these mills has a greatly reduced pH factor, thus contributing a great deal to the acidification of lakes and rivers.

### *Hazardous Waste Storage, Treatment and Disposal*

Hazardous wastes are discarded materials or substances requiring special storage, treatment or disposal in view of the serious danger they constitute to the environment and health. It is estimated that each year Canada generates about thirty-two million tons of industrial wastes (solids, liquids and gases), excluding agricultural, mining or pulp and paper wastes. Of this amount, about one million tons (three per cent) are considered to be toxic or hazardous. These wastes could contain a wide variety of substances requiring proper controls, methods, supervision and choice of sites for either storing them or (if possible) recycling them. The wastes could include: toxic chemicals; pesticides; waste oils; and substances which are infectious, ignitable, explosive or radioactive.

Hazardous waste treatment and disposal can become a serious danger in a number of circumstances. Among them: new waste facility sites established by an industry or level of government may be in the wrong place as regards proximity of water, type of soil, and so forth; many abandoned waste sites now contaminating soil and water are not identified, inspected and cleaned up; waste disposal sites certified for certain types of wastes are also receiving other types, creating dangers of leaks, explosions or both; industrial wastes are secretly and illicitly dumped in rivers, sewers, fields or roadside ditches rather than in approved facilities. These and other activities and situations create grave short-term and long-term dangers for the environment and health. The examples of Port Hope (involving the dumping of radioactive materials), and Love Canal (involving the dumping of chemicals) are only two notorious examples of what can happen. Ground water supplies or surface water can be contaminated, traces of the wastes may find their way into the body and the food-chain by means of air or water pollution, and in some cases serious risks of fire or explosion are created.

This very toxic and dangerous chemical is used in a large variety of industrial activity, and must be handled and transported with great care and under adequate safeguards. Released into the air (as chlorine gas) or into the ground in certain concentrations it constitutes a serious environmental and health hazard. It can constitute a hazard in the ambient environment and in the workplace. Special facilities and safeguards have been developed for the handling of chlorine. The 1979 incident in Mississauga demonstrated that the Canadian public is not as protected from this threat as it once thought, inasmuch as freight trains and trucks carrying this and equally dangerous chemicals pass near and through our cities on a regular basis. No one was, in fact, seriously injured or killed, but by general consensus health and lives were very seriously endangered, and no serious doubts were ever expressed to the contrary.

### *Radiation*

We are exposed to some amount of radiation on a daily basis; within established limits, exposure is thought to be safe. Generally speaking, most external radiation is from the natural background (about one hundred millirems per person per year), some is from the medical and dental use of radiation (from thirty-five to seventy additional millirems), and a very small amount from exposure to the nuclear industry (about two millirems). However, the routine exposure of workers in the nuclear industry is considerably higher. If not carefully controlled by the limiting of exposure time or the use of shielding material, radiation can have devastating effects including leukemia, genetic damage and death. The occasions from which these dangers can arise are many: serious nuclear reactor accidents which would cause widespread death, radiation illness, cancer, genetic defects and contaminated land, water and buildings; accidents during the transportation and disposal of nuclear waste, spent fuel, or radioactive materials for various purposes; radiation leaks or spills in a nuclear reactor or uranium mine, overexposing workers or miners to radiation, or seriously contaminating or endangering neighbouring downstream water supplies. A major concern is that there is no fully safe method of permanently disposing of radioactive waste.

While cancer is by no means the only worrisome pollution-related health problem, it does illustrate graphically the nature of pollution damage. It is estimated that eighty to ninety per cent of cancers is the result of environmental and occupational pollution, if one includes in these "environmental" factors such things as smoking and carcinogens which naturally occur in diet.

## B. Latency, Accumulation and the Ecosystem Approach

In many cases, the pollution activities which are potentially the most harmful are those involving damage, destruction or injury which is not immediate and not harmful to identifiable aspects of the environment or identifiable human victims. Yet the damage

can nevertheless be very grave. Two of the reasons why this can be so have to do with *latency* and *accumulation*. Latency is the delay between the release of, or exposure to, a hazard and the appearance of its injurious effects. Some of the most catastrophic effects can take the longest time to appear. An example is some carcinogens which can be latent for up to thirty years. The mutagenic effect of some hazardous chemicals may only show up several generations after the initial exposure. The process of accumulation means, in effect, that while an individual release of a pollutant may not in some cases be seriously or obviously harmful, many such acts, from one or many sources, may in the aggregate produce an accumulated threat to the environment, health and property, one going well beyond the threshold of what a particular species, resource, ecosystem or human body can tolerate without serious harm. A lake can finally lose the ability to cope with accumulated acid rain, and will die. Or a child exposed to lead over a long period of time can finally become seriously ill and even die because too much lead has accumulated in the body.

One explanation of the mechanics and implications of environmental damage and destruction is that provided by the ecosystem approach. That approach is not without its limitations when pushed to extremes, and it is not our intention to promote it or to justify legal prohibitions and reforms purely on the basis of one or another environmental school of thought. Nevertheless, some findings of ecologists are not disputed, and the general lines of the approach help to underline the potential seriousness of some environmental pollution.[23]

This relatively new approach is a synthesis of the insights and skills of a number of disciplines, especially biology, chemistry, geography and climatology. Whereas those and other fields study the threads of nature, the ecosystem approach studies its "whole cloth." Its proponents insist especially upon two points. They argue first of all that it is erroneous to speak of man *and* environment, or of man as *external* to the natural environment. Rather, humans are internal to, and partners with, the rest of nature. They argue, secondly, that serious harm done to one element in an ecosystem will invariably lead to the damage or even destruction of other elements in that and other ecosystems.

What ecologists mean by an "ecosystem" is any relatively homogeneous and delineated unit of nature in which nonliving substances and living organisms interact with an exchange of materials taking place between the nonliving and living parts. The term "ecosystem" is somewhat flexible and the boundaries between them somewhat arbitrary. Those boundaries are generally based upon what is most convenient for measuring the movement of energy and chemicals into and out of the system. Typical and important interrelated and overlapping ecosystems are: units of land along with the surrounding air and water, or lakes, or river basins, or forests, or climatic zones, or the earth itself or the biosphere (the outer sphere of the earth inhabited by living

23. For details on the meaning and significance of the ecosystems approach, see: E.P. Odum, *Fundamentals of Ecology*, 3rd ed. (London: Saunders, 1971); H.T. Odum, *Environment, Power and Society* (New York: Wiley, 1971); B. Commoner, *L'encerclement* (Paris: Le Seuil, 1972); P. Lebreton, *Les chemins de l'écologie* (Paris: Éditions Denoël, 1978); A. Schnaiberg, *The Environment* (Oxford: Oxford U. Press, 1980).

organisms and including lakes, oceans, soil and living organisms, including man). Within each ecosystem there is, they maintain, a delicate balance and interdependence between all the elements. Systems can cope with and adapt to some interferences, but not others. The overall long-range effect of some intrusions is not yet known with certainty or in detail. Ecologists argue that ecosystems are now known to be subject to very definable and immutable processes, which impose corresponding ecological constraints. They stress two organizational rules, namely, the first two of the three laws of thermodynamics. The first rule (that of conservation of matter and energy) is that matter and energy cannot be destroyed, only *transformed*. The second (the law of entropy) is that all energy transformations are *degradations*, whereby energy is transformed from more to less organized forms. In simpler terms, they explain those rules by the following principles and examples.

The first is that *everything in the environment or individual ecosystems is related*. If one breaks a link in the food-chain, for example, or introduces a substance not biodegradable, there are consequences for the entire ecosystem. Examples of the resulting serious and often irreversible harm are DDT and mercury. Since its massive use in the 1940s, the footsteps of DDT can be followed from wheat, to insects, to rodents, to larger animals and birds, and to man. In its wake it left whole species of animals more or less extinct or with serious reproductive problems. To illustrate the degree of interaction involved and the insignificance of time and distance, traces of DDT can now be found in the flesh of polar bears. The industrial discharge of *mercury* is another illustration. It has been followed from its discharge by pulp and paper industries into the air and water, to its transformation in the water into methyl-mercury by the water's micro-organisms, to its accumulation in the sediment of lakes or its absorption by the fish. Among its victims in the next stage, it is argued, have been the Indians of northern Ontario and Québec who eat those fish and are frequently inflicted with the horrors of what has come to be known as Minamata disease.

The second principle underlined by ecologists is that *unless neutralized, every contaminating substance remains harmful somewhere to something or someone* in the natural environment. Sooner or later we will pay, in some cases dearly, for discarding, for example, nonrecycled industrial toxins into rivers and dumps. Matter cannot be destroyed — only transformed. The atoms and molecules of matter are always preserved by ecosystems in some form. Moreover, if they are not or cannot be transformed, degraded, recycled or neutralized, it is an illusion to hope that that form will become a benign and harmless one.

## C. Limitations of an Unqualified Ecosystem Approach

From the perspective of harm, however, there may be some difficulties and limitations of the ecosystem approach pushed to its extreme. It has been observed that some (by no means all) of its proponents are unjustifiably pessimistic and too rigorous. Some imply that each now stable and healthy ecosystem has inherent worth, and must

be preserved exactly as it is, that any harm or modification to it would be immoral, and that all human impacts upon, or changes to, an aspect of the environment are necessarily unnatural. However, that view has at least three limitations.

(1) Viruses and Diseases: Good or Bad?

First of all, if every ecosystem, every species, is to be preserved and protected "as is" in its natural state, if human values, human judgment and human benefit are to be considered irrelevant, we would be forced to *tolerate many threats and diseases* generally perceived to be themselves harmful if not attacked and even wiped out if possible. An unqualified ecosystem approach pushed to its logical extreme might, for example, force a conclusion that the extinction of the smallpox virus was not a good thing, or that grasshoppers, mosquitoes, noxious weeds, various pests and disease organisms should not be combatted but protected, or that the building of human settlements was wrong because some ecosystems were necessarily harmed in the process. Few if any ecologists seem actually to intend those conclusions, but they do perhaps illustrate the sort of dilemmas implicit in attempts to determine and evaluate environmental harm, and the need to qualify the "deep ecology" stance in the light of some other considerations.

(2) The Adaptive Capacity of the Environment

A second limitation of an extreme and rigorous ecosystem approach used to measure environmental harm, is that ecosystems are not only in many respects vulnerable, but also *adaptive and evolutionary*. Up to a point and in some respects, ecosystems can respond to and accommodate change. Some man-made alterations of an element of the environment can, in particular cases, trigger adaptive responses. Ecosystems are not in all respects fixed; there is a degree of rhythm and fluctuation. It becomes important in this regard to weigh impacts of polluting contaminants and activities as to whether they are degradable and noncumulative (for example, many pulp and paper wastes), nondegradable and cumulative (for example, mercury, lead, PCBs), reversible or irreversible, natural yet likely to cause damage to some environments in large concentrations (for example, sulphates, chlorides). There are undoubtedly good reasons for policy makers to give more attention to the "inherent worth" view of the natural environment, but this adaptive mechanism itself of ecosystems has an inherent worth and should be added to the calculations of harm. In some cases, the conclusion will be that a substance or activity goes well beyond the adaptive capacity of an ecosystem; in other cases it may not.

(3) Tolerating Pollution for Legitimate Social Purposes:
Balancing the Human Health Standard.

There is yet a third and most important factor to be weighed in calculations of serious pollution harm, a factor more or less incompatible with an ecosystem approach which is strict and absolute. It is generally acknowledged in our political and economic

system, and in our environmental policies and laws, that there are a number of legitimate social purposes which can justify, at least for a period of time, varying degrees of pollution, deterioration and risk — which permit downgrading the pollution harm and risk from serious and intolerable to less-than-serious and tolerable. It is not, of course, uncommon for the law to conclude that what would be reckless and unacceptable behaviour in some circumstances, can be justified if socially desirable for one reason or another. For example, a very risky medical operation can, in some circumstances, be acceptable and even desirable if it offers the only chance to save a life.

Primary among the goals and purposes implicitly or explicitly underlying environmental policies, regulations and statutes are economic ones. An environmental agency may judge, for example, that a particular existing industry should be allowed to exceed, at least for a specified time, the statutory emission standard for a particular contaminant, because there may be good reason to believe the expense of strict compliance will bankrupt the company and cause widespread unemployment. Similarly, it may be judged that the only way to secure the establishment of a new industry in an economically depressed area and to develop and market local resources is to permit it to do some widespread ecological damage, and/or, at least for a time, exceed by a considerable margin the statutory emission standards. It would, of course, be naive and unrealistic to assume that all such judgments are equally defensible, or that the economic viability and employment arguments of industry should be accepted uncritically by agencies. However, it would be equally naive and Utopian to expect that environmental decision making can ever be completely insulated from economic and political considerations.

It should be noted that the mere emission of a particular contaminating substance beyond the standard established in the relevant statute or regulations need not in itself always imply serious (or even minor) environmental and health harm. In the first place, the standard itself may be open to legitimate debate as to its accuracy and appropriateness. In some cases the standard may, by some criteria, be too strict, or based upon uncertain evidence. On the other hand, it may be felt by some to be not strict enough. Secondly, it is at least the intention of regulation and standard makers to build into the emission standards a certain margin of safety.

The "social utility" and other factors just indicated demonstrate that judgments before or after the event about the types and degrees of pollution which will be characterized and treated as serious and intolerable, as opposed to minor and tolerable within regulated limits, are not and cannot be strictly and exclusively "scientific" in nature. Determinations of harm and degree of harm are to a large degree value-judgments, rather than scientific calculations. More precisely, such judgments are based upon criteria which themselves imply or import value-judgments. Therefore, these judgments about the acceptability of harm and risk should not be made only by the scientist as scientist.[24]

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24. See T. Page, "A Framework for Unreasonable Risk in the Toxic Substances Control Act (TSCA)" in W. Nicholson, ed., *Management of Assessed Risk for Carcinogens* (1981), 363 *Annals of the New York Academy of Sciences*, New York.

There is, then, a major distinction to be made between pollution offence and the "paradigm" (criminal) offences of homicide, assault and theft, as regards seriousness. The latter are *always* considered seriously harmful to individuals and fundamental social values, and therefore criminal (if the *mens rea* conditions are met), no matter what the degree of injury or loss. However, especially given the "social utility" factor, it is possible at present for pollution which by some criteria is endangering to the environment (and human health) to be characterized in the final analysis as not serious and even tolerable. To characterize the harm and danger as not serious need not, of course, mean that the conduct should be subject to no legal prohibitions and sanctions, only that the conduct in question would not fall within the scope of the *Criminal Code*.

That balancing of the environmental risks involved in permitting harmful pollution, with (for example) the economic implications of prohibiting it, is to at least some extent inescapable "before the event" in the formulation of environmental policies, standards and regulations. However, that same balancing is also legimitate "after the event," that is, in determining the seriousness of the alleged offence. At this stage, the social utility factor as a criterion of gravity can be one of the considerations in the choice among various compliance mechanisms authorized by the relevant statute, and in the decision about how rigorously to enforce the statute in this case, including whether or not to prosecute.

However, weighing the social utility of an alleged incidence of pollution to determine its seriousness is also inevitable if we go the further step being proposed in this Paper and characterize some of these activities as potentially *criminal in nature*. One of the criteria of pollution as a crime would be that it must be proved to be seriously harmful. That would be determined, at least in part, by whether conduct which is harmful or endangering by some scientific criteria, may in the final analysis be less than seriously harmful and endangering, or even justifiable and tolerable, in part because it promotes valid social goals. It has been suggested to us by one of those consulted that an alternate or more specific way of highlighting the social utility factor would be to make it a defence, or simply leave it to guide prosecutorial discretion. Both approaches appear to us essentially compatible with the analysis to this point. However, as suggested below (E. The Jury and Serious Pollution), we feel the jury may have a unique and important role to play in the balancing of harm and social utility.

In any event, the life and health of others cannot be traded off for other apparent benefits, whether economic or other. We do not permit such a trade-off for other criminal offences involving serious harms or dangers to human life and bodily integrity. That being so, we may formulate the following by way of a general criterion: (1) the more certain is the evidence or likelihood of present or future harm and danger to human life and health, and the more serious the nature of that harm and danger, the less legitimate and persuasive should be other socially useful goals as justifications for the pollution or for reducing its classification from serious to minor, and the more compelling would be arguments for the criminal nature of that activity; (2) the less likely are the serious present and future human health harms and dangers, and the more

likely the interests affected are exclusively those of the use and enjoyment of the environment, the more relevant and legitimate is the weighing of other societal goals by way of mitigating its classification as potentially serious harm.

## D. Flagrant Violations of Federal or Provincial Statutes

Normally, a necessary (though insufficient) condition for a pollution activity to be classified as harmful enough to fall within the scope of the new *Criminal Code* prohibition, should be that it goes far beyond the allowable activities and permissible emission standards established by relevant federal or provincial environmental statutes and regulations. It is of course necessary that *Criminal Code* offences avoid vagueness and be as specific as possible about all their elements. It should be clear to all parties what the prohibited offence is. A "seriously exceeding" criterion of this sort obviously leaves some latitude and unpredictability regarding the degree of harmfulness which can count as criminal.

However, some latitude is inescapable and does not, in our view, defeat the requirement for specificity. In some cases, the catastrophic or near-catastrophic nature of the harm caused or risked by pollution will be readily established to meet this serious harm test. For activities less than clearly catastrophic, the normal requirement that reference be made to relevant federal or provincial statutes would provide considerable specificity.

It would limit the pollutants and activities which could fall within the scope of the *Code* offence, to those which are in some respect already prohibited or regulated. A *minimum* requirement or starting-point for "eligibility" as a real crime would be that what was done was *unauthorized*, that is, a (serious) breach of a statutory prohibition or standard. It should follow in our view that a polluting activity which was authorized by an environmental agency, for example by a control order or other legitimate mechanism, would normally preclude a prosecution under this new *Criminal Code* offence. To act otherwise could constitute unfairness and an abuse of process. However, an agency which negligently authorized seriously harmful or endangering pollution could itself incur liability.

Further specificity as to the degree of harmfulness will be provided by the *court*, weighing all the considerations and evidence. Given the unique nature of environmental pollution offences, including the variety of possible sources, the range of harms and other unique circumstances, it is not in our view possible or desirable to describe this new *Code* offence in other than somewhat general terms. One danger to be avoided is clearly that of vagueness. It must be clear what it is that is being prohibited, what constitutes the crime. However, to be too specific, for instance by referring to particular pollutants and activities and emission standards which will be considered seriously harmful for purposes of this offence, it would exclude activities and contaminants not yet available or not yet suspected to be potentially seriously harmful. That sort of detail and specificity would be foreign to the *Criminal Code*, and is best left to the relevant regulatory statutes.

It might be objected that the federal *Criminal Code* should not use provincial legislation as a reference point in the manner indicated. However, it would not be the first time that federal legislation to some extent depended upon that of the provinces. An example is the *Canada Evidence Act*, in which section 37 specifies that the relevant province's evidence laws will apply.[25] As well, it has been held the "unlawful purposes" referred to in the *Criminal Code* prohibition of conspiracy, paragraph 423(2)(*a*), means contrary to both federal and provincial legislation.[26]

The relevant federal and provincial environmental standards *sometimes differ in the severity* of their prohibitions and emission standards. That being so, it is arguable that the Crown should be allowed to choose either the federal or the provincial statute as the starting-point in meeting the "seriously harmful" test. It might be objected that allowing that choice would violate the "equal protection, benefit, treatment" provision of the *Canadian Charter of Rights and Freedoms* (section 15) by not applying the same standard to everyone. While more study must be made of this point, it is our present position that environmental and health protection should have such a high priority in our society that a certain degree of flexibility regarding equality in this instance should be allowed. It may well be an instance when section 1 of the *Canadian Charter of Rights and Freedoms* should apply, that is, the provision for "reasonable limits" to rights and freedoms when they can be demonstrably justified. Two factors should lessen, to at least some degree, the likelihood of inequality. One is that since only seriously harmful activities should be considered crimes, they will presumably be violations well beyond what is permitted by *both* federal and provincial legislation. Another is that whatever standard is selected as the starting-point, the question of whether the act or omission really was seriously harmful in this specific instance is always open to challenge.

## E. The Jury and Serious Pollution

The essence of the proposed crime against the environment, then, is that of substantial harm to the environment without any overriding social justification. However, how is a court to make that determination, to balance the repudiation of pollution with its sometimes social utility? In what manner should it be decided that a given instance of pollution is so far beyond what was authorized, is so gross, and lacking in social utility that it merits the severest societal condemnation and punishment? Applying the "seriously harmful" test requires for coherence and fairness not only a specific set of criteria, but also specific mechanisms best able to grapple with the inherent value-judgment involved.

The ideal mechanism for making that determination in given instances may well be that of the *jury*. The accused charged with a crime against the environment would have a right to a jury trial, and the Crown would be able to require a jury trial even

25. *Canada Evidence Act*, R.S.C. 1970, c. E-10, s. 37.

26. *Re Regina and Gralewicz*, [1980] 2 S.C.R. 493 (5:2), 54 C.C.C. (2d) 289.

when an accused elects to be tried by a judge alone. That would mean that only in the event that both the Crown and the accused elect trial by judge alone would a jury not be involved. The jury, given its representative function and lay character, would seem to be particularly apt to rule on issues which are largely matters of morality, public tolerance and social utility. That is, it may be argued, especially the case regarding matters about which perceptions and tolerances are evolving and fluid, and to one extent or another vary from community to community, from region to region. In the view of some, that would make a jury of ordinary members of the community the best arbiters of matters such as obscenity or censorship. Its representativeness and its lay character may also make it the best forum to rule on prosecutions for pollution crimes. Given the jurors' roots and representativeness in the community, they may be in the best position both to appreciate and repudiate the gross and harmful nature of some pollution, and in some other cases, to tolerate some degree of it for social reasons they decide are overriding for their community or region.

There is, in our view, much to be said for this approach, although there are difficulties as well. One of the problems is that section 498 of the *Criminal Code* presently allows the Attorney General to require the accused to be tried by judge and jury only if the offence is punishable with imprisonment of more than five years. On the other hand, that provision is not written in stone and could be amended. Some have criticized the use of juries because of their alleged inability to decide issues involving considerable scientific or technical complexity. We are not persuaded that this is always or need always be so. Using the jury in the manner suggested does require further study and more comments before the Commission adopts a final position pro or con. We invite readers' views on the proposed role for juries in these cases.

## F. Conclusions

1. The ecosystem approach has provided crucially important data and insights, particularly regarding the mechanisms and repercussions of pollution damage, and by demonstrating that humans are not external to, and separate from, the natural environment. However, given the adaptive capacities of the environment, not all instances of pollution are harmful, and given the positive features of human settlements, economic production and the control and extinction of diseases and other dangers, a limited degree of damage to elements of the environment is inevitable, beneficial and even "natural."

2. A major target of a *Code* offence against environmental pollution should be "environmental catastrophes." Normally, such catastrophic events will easily meet the "seriously harmful" test of a *Code* crime.

3. Some instances of pollution may be characterized as less than serious or even tolerable in view of their social usefulness. Such claims should, however, be subjected to very careful scrutiny and not be accepted hastily and uncritically.

4. The lives and health of others should not be traded off for other apparent social benefits; the more serious the damage or danger to human health, the less legitimate are arguments to characterize pollution conduct as other than serious or acceptable on the grounds of its usefulness to society.

5. In determining the degree of harmfulness, courts should especially consider the following: the vulnerability and adaptability of the ecosystem or ecosystems exposed to the particular polluting conduct and/or substances in question; the latency factor of some pollutants; whether or not the substances in question are degradable or nondegradable, cumulative or noncumulative; and whether the effects on the environment are reversible or not.

6. To qualify as "serious" environmental pollution, prohibited by the *Criminal Code*, a necessary (although not sufficient) condition, should normally be that the activity is expressly unauthorized, that is, a flagrant and dramatic breach of a federal or provincial statutory prohibition or standard.

7. The jury, given its representative function and lay character, may well be the ideal and normal vehicle for determining whether a given instance of pollution is so gross, so far beyond what was authorized and so lacking in social utility that it meets the *Criminal Code* tests of causing or risking serious harm to environment and human health.

## III. The Mental Element Test

### A. Pollution As a Continuum

The third test of a real crime, as opposed to a "quasi-crime" or regulatory offence, is that the act or omission must be in some sense morally wrong. It is not enough that the act was done; justice requires that it must have been done intentionally, recklessly or with criminal negligence. Although not a sufficient condition, it is a necessary condition that one of these mental elements be established. This Commission has explored and refined this mental element or *mens rea* requirement in a number of past and recent Papers,[27] and the same requirement should apply to this new *Code* offence of a crime against the environment.

27. See: *Our Criminal Law*, *supra*. note 3; Law Reform Commission of Canada, *The Meaning of Guilt: Strict Liability*, [Working Paper 2] (Ottawa: Information Canada, 1974); Law Reform Commission of Canada, *Limits of Criminal Law: Obscenity: A Test Case*, [Working Paper 10] (Ottawa: Minister of Suply and Services Canada, 1977); Law Reform Commission of Canada, *The General Part: Liability and Defences*, [Working Paper 29] (Ottawa: Minister of Supply and Services Canada, 1982); Law Reform Commission of Canada, "Omissions, Negligence and Endangering," [draft Working Paper] (1985).

Acts or omissions best characterized as mere negligence or carelessness should not qualify for prohibition and penalization by the *Criminal Code*. Carelessness, and most acts or omissions failing to measure up to the standards of diligence, should be the target of regulatory law and statutes. That proposal by this Commission, made some years ago, was subsequently substantially adopted by courts in a number of decisions, the most significant of which was that of the Supreme Court in *Sault Ste. Marie*.[28] The court distinguished between real crimes and public welfare or regulatory offences, and established in effect three categories of offences distinguished by the degree of *mens rea* required and the defences available. They are:

(1) Offences in which the prosecution must prove *mens rea*. They are true crimes, usually found in the *Criminal Code*, but they can include statutory offences using such words as "wilfully," "intentionally," "knowingly."

(2) *Strict liability* offences, not requiring proof of *mens rea*. The doing of the prohibited act, the *actus reus*, is all the prosecution must prove. But the accused will have available a defence of due diligence. These strict liability offences were meant to constitute a new "halfway house" between *mens rea* offences and those of absolute liability.

(3) Offences of *absolute liability*, requiring only proof of the prohibited act and allowing no defence of due diligence.

However, regarding environmental offences such as pollution, some important qualifications should be added. First of all, it should not be thought that *all* instances of pollution should be classified and treated exclusively as regulatory violations, to be prohibited, controlled and sanctioned only by regulatory statutes. Many, if not most, instances of unauthorized pollution are accurately classified as acts of carelessness or mere negligence in the course of legitimate enterprises, and are therefore best controlled and sanctioned by administrative mechanisms or prosecutions according to the provisions of environmental regulatory statutes. It is equally true that *Sault Ste. Marie* characterized pollution offences as typically being within the category of public welfare or regulatory offences.

However, nothing in that decision or elsewhere precludes the possibility that some pollution activities could best be classified and treated as real crimes if they meet the required tests. In that regard, the *Sault Ste. Marie* decision was essentially descriptive, not prescriptive, as to what kind of activities fall into which category. Its relegation of pollution offences to the public welfare or regulatory class was based on factors such as how those activities were regulated *at that time*, the role of *mens rea* and the relevant defences, the wording of the particular provincial statute which applied in that case, and the degree of harm perceived in the violation under consideration. It is then quite consistent with both this Commission's recommendations regarding *mens rea*, and with the *Sault Ste. Marie* decision, to maintain, as we now do, that pollution activities can admit of many degrees in terms of harm done, dangers created, values threatened and degree of *mens rea*.

28. *The Queen* v. *City of Sault Ste. Marie*, [1978] 2 S.C.R. 1299, 40 C.C.C. (2d) 353, 3 C.R. (3d) 30.

## B. Intent, Recklessness, Negligence

The meaning of *intent*, as distinct from recklessness, causes few definitional problems in the present context. Essentially it means simply intending the natural consequences of one's own act. It is generally said to include two shades, namely "purposely" and "knowingly." "Purposely" means wanting to cause the result, whereas "knowingly" means knowing the result will certainly occur whether or not directly wanted. "Recklessness" is more difficult to define as indicated by the various formulations proposed. In effect it is generally said to mean: knowing the result might occur yet acting unreasonably or being wilfully blind. A similar formulation would be: doing an act realizing what the result of one's conduct will probably be, but being indifferent about the result. Various policy papers and draft Criminal Codes have proposed more elaborate definitions, but the main ingredients remain fairly constant and similar.

As the Commission has recommended elsewhere, the *test* of the mental element should be a subjective one, not an objective one. In other words, *constructive* knowledge is not sufficient for either intent or recklessness, that is, knowledge one would have had if one did not neglect to make such inquiries as a reasonable and prudent person would make. There must be actual knowledge or wilful blindness. However, the mental element may, of course, be imputed from the act and evidence. Inference from external factors and circumstances can establish what is referred to as a "presumption of intent," based upon the principle and simple reality that the normal person knows what he is doing and is responsible for his actions.

Personal guilt and legal guilt will usually coincide, but guilt need not be totally subjective. Since intent and recklessness have to be inferred by external circumstances, the *actual* state of mind of the accused may be other than that inferred by law. Because law sets objective standards, a person need not *feel* guilty or *believe* he is, in order to be so in the eyes of the law. Because it is assumed that the general standards of criminal law are those of the community, and must be lived up to, ignorance of the law is normally not an excuse.

In its recent draft Working Paper entitled "Omissions, Negligence and Endangering," the Commission deals in some detail with the subject of *criminal negligence*. Since essentially the same principles and considerations should, in our view, apply to crimes against the environment, we need only summarize here the Commission's analyses and proposals on that subject.

It is of course true that the central principle of criminal law is that there should be no criminal liability without fault. At common law, there was only one exception to the requirement of a guilty mind (intent or recklessness), namely homicide. It could be criminal if the killing was done in the course of another crime or with gross negligence. Other exceptions were subsequently added by statute, including, for example, the *Criminal Code* prohibition against injuring others by criminal negligence, and the

crime of dangerous driving. It is our view that there are good reasons to retain crimes of negligence, and that criminal negligence should suffice as the required mental state for some crimes against the environment.

It is overly simple to claim that negligence is not a state of mind, and therefore cannot constitute *mens rea*. Negligence in Canadian criminal law is not the same thing as inadvertence — not noticing or not paying attention. Rather it means not taking sufficient care — in some cases through inadvertence, but in others by misjudgment or inadequate skill. Some claim that criminal negligence should be ruled out because the inadvertent offender cannot by definition be deterred by such a legal prohibition. We disagree. The inadvertent offender cannot be deterred at the time of acting, but he can be at other times. The provision of a punishment for negligence can encourage others as well to take more care, to remain vigilant. That has a particular reference to those responsible for the proper functioning and maintenance of industrial or other enterprises which could do great damage to the environment and human health if operators and inspectors become careless.

Another good reason to retain criminal negligence and apply it to environmental crimes is that both individuals and the public generally have a right to be reasonably protected from injury by the negligence of others. Just as the carelessly inadvertent driver is not considered free from blame by failing to advert to what was on the road, neither should those with responsibilities in the area of environmental protection and safety. To the driver, the law rightly says "when driving you must pay attention, be aware of what is happening, be careful." The law should say the same to those who have negligently caused serious harm or risk to the environment.

However, we continue to believe the criminal law should be used with restraint, and that not every act of negligence should be considered an offence. In its draft Working Paper, "Omissions, Negligence and Endangering," the Commission therefore proposes restricting criminal negligence to acts which cause or risk serious harm such as death and bodily injury. Essentially the same principle should be applied to crimes against the environment. It should be a criminal offence negligently to cause serious harm or risk to the environment, but only insofar as death or bodily injury results or life and health are endangered. That would mean, in effect, that negligent environmental pollution which only interferes with a right to use and enjoy the environment, or which in some manner violates the property rights of others, but in neither case is likely to harm or endanger human life or health, would not be encompassed within our definition of this crime.

As to the *degree* of negligence which should be required for an environmental offence to be criminally negligent, the arguments and conclusion of our draft Working Paper, "Omissions, Negligence and Endangering," should apply to crimes aginst the environment as well. By way of comparison, three ascending levels of fault are relevant — mere civil negligence, gross or criminal negligence, and recklessness. Mere civil negligence means failing to take the care a reasonable person should. Either the defendant sees the risk and takes it, but because it is not serious or unjustifiable

he is not reckless; or he does not see the risk but should have been aware of it. Gross or criminal negligence falls further below the standard of reasonable care than does ordinary or civil negligence. Recklessness generally means the conscious taking of a serious and unjustifiable risk.

In our view, negligence in criminal law should be restricted to what is sometimes called "gross" negligence, both as regards negligently harming and endangering the environment, and as regards all other criminal negligence. The difficulty with gross negligence is that it cannot be clearly defined or quantified. Most attempts to define or quantify "gross" are inevitably circular. In this regard, we face somewhat the same difficulty as discussed earlier about the notion of "seriousness." However, in the environmental arena, at least *some* degree of specificity can be found for "gross" from the same source we proposed for "serious," namely, the standards of conduct, procedures and emissions which apply in the relevant statutes, regulations and industry practices. Their mere negligent violation would not normally count as gross negligence, but their negligent violation *greatly in excess* of those standards and accepted procedures could be considered gross.

## C. Endangering the Environment

The issue of endangering as well was raised in this Commission's draft Working Paper, "Omissions, Negligence and Endangering," and we need only now expand and apply some of those same principles and considerations to crimes against the environment. It should be noted at the start that our criminal law does already prohibit endangerment. Although in principle all common law liability was for causing damage to injured victims, it has long been acknowledged that crimes can cause two kinds of harm — to individual and identifiable victims (that is, primary harm) and to the community in general (that is, secondary harm).

Our criminal law already considers secondary harm alone sufficient for criminal liability (and thereby prohibits endangerment) in various ways. The first such class of offences is the *inchoate* offences, those in which the mere attempt, incitement or conspiracy suffices. The harm, or harm risked, is thereby prohibited before it ensues, that is, while it is only a danger. There are, as well, a number of endangerment offences aimed at pre-empting the commission of crime — for example, bribery and possession of house-breaking instruments. Another variety of "endangering offence" is that of *public nuisance*, found in our *Criminal Code* section 176. Paragraphs (2)(*a*) and (*b*) prohibit any act which endangers "the lives, safety, health, property or comfort of the public, or ... obstructs the public in the exercise or enjoyment of any right that is common to all the subjects ...." A last category includes a large number of specific

statutory offences of endangerment — for example, dangerous driving, dangerous operation of vessels, dangerous use of explosive substances (sections 77 and 78) or of offensive volatile substances (paragraph 174(*a*)), mischief to property when its commission causes actual danger to life (subsection 387(2)), and the dangerous weapon offences (sections 82 to 106).

The Commission concluded, in that earlier draft Working Paper, that the new Criminal Code should include a general offence of endangerment within the "offences against the person" chapter. It so concluded for a number of reasons. The present endangering offences are somewhat random, *ad hoc* and lacking principle. A general offence of endangerment would provide a comprehensive and systematic statement. There are many not-so-recent and recent precedents to be found in other jurisdictions for general endangerment offences.[29] To provide for such an offence would indicate loudly and clearly that the wanton disregard of others' safety threatens a fundamental value and merits denunciation and sanction.

The Commission has also concluded that the general endangering offence should be confined to conduct causing risk of *death or serious bodily injury*. Conduct endangering the convenience, comfort and property of *individuals* would continue to be left to the civil law, whereas conduct endangering the convenience, comfort and property of the *public* would continue to be dealt with under the special offence of common nuisance. Just as gross negligence suffices as the mental element required for the general offence of endangerment, so it should suffice for endangering the environment. If death and serious injury suffice for criminalizing gross negligence, then the *risk* of death and serious injury should be treated in the same manner. It was proposed as well that this general offence should not replace, but should *supplement* the more specific endangering offences.

Essentially the same considerations and principles about endangerment apply, in our view, to the crime against the environment proposed in this Paper. The environment too can be seriously endangered as well as damaged, as can its use and enjoyment, and human life and health. However, several additional considerations specific to environmental pollution arise, and call for specific responses.

First of all, it would be somewhat artificial to separate, in any hard and fast way, *damaging* the environment and *endangering* the environment. Many pollution activities and contaminants appear to do both at the same time.[30] That suggests the need to include in these offences both kinds of harm — damaging and endangering.

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29. Already in 1846, the English Criminal Law Commissioners recommended the creation of two endangerment offences, that of maliciously putting the life of another in danger, and that of negligently causing danger to the life of another. Neither was in fact incorporated into the criminal law of England. The *Criminal Damage Act 1971* was enacted in England, providing in paragraph 1(2)(*b*) for an offence of damaging property by "intending by the destruction or damage to endanger the life of another or being reckless as to whether the life of another would be thereby endangered; ...." In the United States, the *Model Penal Code* contains (in section 211.1) an offence of reckless endangerment, a provision adopted in the Criminal Codes of a number of states and in the proposed federal Code as well. Several non-common law jurisdictions also provide general endangerment sections, for example, Sweden, Poland and Austria.

30. That is generally true for example of the substances described above (in II. A.).

Secondly, as already argued earlier in this Paper, it can arise that *damage* to a resource so seriously interferes with its use and enjoyment that such acts should sometimes by exception be considered criminal, even when there are no likely health or life implications. An example would be when a major source of livelihood is affected. However, acts which seriously *endanger* that resource in that manner should also, by exception, be considered criminal. Whether the damage actually resulted or not was only fortuitous from the point of view of the endangerer. We therefore conclude that for purposes of this environmental offence, criminal endangerment need not be limited to conduct causing risk of death or serious bodily harm, but can extend by exception to conduct causing risk of serious harm to the environment alone.

Thirdly, given the restriction applied earlier regarding the scope of gross negligence, that is, that it should be applied only to negligently causing death or serious bodily injury, the same restriction should apply to negligently endangering. One could not be criminally liable for negligently endangering the environment when there are no known or likely dangers to life or health even where gross negligence is otherwise proved. However, *reckless* or *intentional* endangering of a resource without resulting danger to health could, by exception, qualify as criminal endangering. It can, nonetheless, be recalled that much pollution which is seriously damaging or endangering to a natural resource will also, by definition, present serious risks to life or health in the short or long run.

A fourth and last point has to do with the justifications for not incorporating the new special offence of endangering (and damaging) the environment into a new general offence of endangerment. The most fundamental reason is simply that environmental pollution is in so many respects special, unique and technical/scientific in nature that it requires special treatment. As well, given the high value accorded the natural environment and the many serious pollution threats it faces, the prohibition and sanction of its endangerment should be direct and explicit.

## D. Acts, Omissions and Duties

Serious harm and danger to the environment can be caused by both acts and omissions. A failure to prevent harm can have just as grave consequences as causing harm by positive action. Since the general subject of omissions is being addressed in another draft Working Paper by this Commission, here we need only briefly summarize some of the analysis and tentative conclusions of that Paper and show their relevance to crimes against the environment.

For various reasons, at common law the general principle is that criminal liability attaches to acting rather than not acting, malfeasance rather than nonfeasance. The common law principle is that not-doing is no trespass. But three exceptions have also been recognized, and each of them could apply in the context of offences against the environment. *One* is the type of conduct which is really better seen as part of some

wider course of acting than as not acting — what could be referred to as "pseudo-nonfeasance." In a sense, conduct in this category involves not doing something, but it is more reasonably a question of carrying on some wider activity improperly. Examples in the pollution context would be a plant worker who fails to close a valve, thus allowing a massive spill of highly contaminant pollutants, or a transporter of hazardous waste who fails to inspect his truck.

A *second* exception involves not acting or omission which is explicitly designated by the law as an offence, a nonact which is defined by law as a crime of omission. This too could readily apply to crimes against the environment, in that the offence would simply require certain acts to be performed, and classify nonperformance of that duty as a criminal omission. In such cases, the omission itself is the crime, and liability is automatic and obvious, whatever the result.

The *third* exception is what is referred to as "commission by omission," that is, the commission of a "result-crime" by the failure to perform a legal duty. What makes commission by omission an offence is the *causation of harm* by the omission, whether or not the omission itself attracts liability. The basic principle involved here is that you have a duty to act for the benefit of another whenever, by reason of your own commitment, that other is dependent on you and entitled to rely on you to act in that manner. This dependence and entitlement can arise in a number of ways — (1) in family relationships; (2) from voluntarily assumed relationships in which one person (for example, a doctor) makes a commitment which leads the other to rely on him; (3) from joint enterprises involving risk or danger in which there is at least an implicit commitment to help each other out of danger (for example, mountaineers, astronauts, and so forth); and (4) in dangerous situations in which one party is dependent on another party who created that danger or at least has control over it. In this last instance there is no commitment; it is the situation itself which creates the dependence and gives rise to duties.

In various ways, one could conceptualize and envisage environmental protection duties arising especially out of the fourth of those relationships. In this case, the person who creates (or controls) a danger has a duty to safeguard others from it. That would apply, for example, to companies which manufacture, transport or dispose of environmentally dangerous materials or substances, or to municipal and other levels of government responsible for disposing of waste, ensuring public health, and so forth. Insofar as their activities and products both make members of the public dependent upon that industry, company or level of government, and expose the public to resulting environmental and health dangers of their creation and within their control, they (and their agents and employees) can be said to incur the duty to do what they can to safeguard the environment and public health.

It is reasonable and fair to go further and insist that the greater the dependence and the environmental and health dangers which could be created by the conduct of individuals or groups, the stricter and more onerous should be the duty to ensure the safety of the exposed environment and people. That would mean that some corporations,

governments and other groups could be held to higher standards of care than others. The same should apply to persons holding positions of power within those organizations. Higher standards of care could be imposed on those individuals as agents or employees of those groups than we would on individuals qua individuals.

The phrase "duties imposed by law" which could incur criminal liability has usually referred to *any law*, including legislation and common law. But this Commission has tentatively proposed in its 1982 Working Paper 29, *The General Part: Liability and Defences*, that the "law" which creates duties, the omission of which would incur criminal liability, should be restricted to the law in the *Criminal Code*. Comprehensive duties would be specified in the General Part, and more specific duties would be attached to specific offences. Normally then, that would exclude criminal liability for breaches of environmentally related duties to be found in federal or provincial regulatory standards. However, earlier it was proposed that *very serious* breaches of those environmental statutes would normally constitute a necessary (though not sufficient) qualification for eligibility of that conduct as a real crime. In our view, that should apply as well to the *duties* imposed by those federal and provincial statutes.

There need not, in our view, be any inconsistency in affirming both proposals at once, that is, locating duties incurring criminal liability in the *Code*, yet including among them the very serious violations of statutory duties. Consistency could be achieved in one of two ways — either by including in the *Code* a detailed schedule listing specific duties based upon, but far stricter than, those found in the statutes, or by a duty included in the *Code* offence not to violate seriously the duties provided for in the relevant environmental statute. Since the *Criminal Code* is not the place to locate detailed standards and duties, the second choice would, in our view, be preferable.

In conclusion then, omissions do have an important place in our proposed offence of crimes against the environment. There could be criminal liability for not acting in three situations: when not acting is part of a wider course of conduct comprising an act; when not acting is specifically defined as an offence; and when not acting constitutes the nonperformance of a legal duty provided for by the *Criminal Code* and results in serious harm or danger to the environment. The offence would make one criminally liable for failing to take reasonable measures to prevent or mitigate grave environmental damage or danger, when one has created the danger, or at least has control over it.

## E. Conclusions

1. The mental element required for a crime against the environment should be intention, or recklessness or negligence.

2. The degree of negligence required for criminal liability should be what is often labelled "gross," that is, negligence which falls well below the standard of reasonable care which is required for ordinary or civil negligence.

3. Negligent environmental pollution should only fall within the scope of a *Code* crime against the environment if it causes or risks death or bodily injury.

4. Prosecutions under the *Criminal Code* for offences against the environment should be available not only for *causing* serious harm to the environment (and as a result to human life or health), but also for seriously *endangering* the environment (and as a result human life or health).

5. To criminally endanger the environment should normally require that, as a result, one has caused serious *risk to human life or health*. However, *intentional* or *reckless* endangering of the environment could, by exception, be considered criminal even when there are no likely dangers resulting for life or health, but only to the use and enjoyment of a resource. An example would be that of environmental pollution which endangers the major source of employment for a community.

6. However, in the interest of criminal law restraint, criminal liability for *negligently* endangering the environment should admit of no such exceptions, and should require a resulting risk of serious harm to human life and health.

7. *Criminal Code* offences against the environment should prohibit not only *acts* which seriously harm or endanger the environment, but also harmful or endangering *omissions*.

8. Omissions should be included in these *Code* prohibitions by means of a specific duty to take reasonable care to prevent or mitigate grave environmental damage, destruction or danger when one has created the danger or has control over it.

9. The greater the dependence of the public and the greater the dangers to environment and health which could be created by the activities of a business or level of government, the stricter and more onerous should be their duty to ensure the safety of the elements of the environment and the people exposed to pollution harm.

10. The "duties imposed by law," the omission of which could incur criminal liability, should encompass both specific duties attached to the *Code* offences against the environment and flagrant and serious violations of the duties imposed by federal and provincial environmental statutes.

## IV. The Enforcement Test: Respecting the Rights of the Accused

### A. Restraints and Principles

The fourth test of criminality proposed by the Commission is this: the *enforcement measures* necessary for using criminal law against an act must not themselves seriously contravene fundamental values. This test, like the others, must apply as well to crimes

against the environment. Humanity, freedom and justice impose some important limitations and restraints on the enforcement measures and sanctions available. However, these principles and restraints upon enforcement do not, in our view, constitute an argument against criminalizing some environmental offences as proposed in this Working Paper.

Respect for *humanity* not only establishes limits to what we can do to each other, but also to how the law treats suspects and criminals. For the individual offender or suspect, that rules out "cruel and unusual" punishment or sentences which reduce that person to an object, which do not treat him as a person, including for example torture, maiming or intrusive forms of rehabilitation. The same constraint must apply to individuals and groups suspected of, or convicted of, environmental offences. Considerations of *justice* impose further tests and principles, especially these: guilt or innocence and the specific sentence should be fairly determined according to available evidence; punishment should be appropriate to the offence and the offender; like cases should be treated alike; and all are equal under the law, whether individual or corporation according to the doctrine of criminal equality.

Justice demands that like cases should be treated alike and different cases differently. Serious environmental offences are, in effect, crimes of violence against the environment, and very often (directly or indirectly) against human life and health. An important conclusion may follow: that in instances of serious harm or risk, environmental laws are criminal laws and should be as rigorously enforced as those against murder, assault and theft, unless there are very good reasons to the contrary.

With regard to enforcement of criminal law, two principles in particular are imposed by considerations of freedom. One is the *presumption of innocence*. The accused does not have to prove his innocence; he is presumed innocent. It is up to the prosecution to prove the material elements of an offence, and beyond a reasonable doubt. Failing such proof, one remains free of criminal conviction. The second is the presumption that an act is not a crime unless the law specifically says so. If the criminal law does not prohibit the act, one is free of criminal liability for doing it (though it may, of course, be prohibited by some other branch of law — regulatory law, for example). This principle of noncriminality, that is, the presumption that an act is not a crime unless the law specifically says so, constitutes a good reason why this Paper argues for the inclusion in the *Code*, of specific offences against the environment. The next chapter will conclude that the *Criminal Code* at present does not, in a sufficiently clear and unambiguous manner, denounce and prohibit environmental crimes.

There is, in our view, no good reason to conclude that a *Code* crime of harming or endangering the environment would fail this third test. There is every reason to believe that at least some environmental offences can be both effectively and fairly enforced as crimes, that is, without contravening those crucially important common law principles. If prosecutions for this offence fail for lack of proof "beyond a reasonable doubt," then that is as it should be, and as it is with all other criminal offences. Given the specific uncertainties and debates and the standard of proof requirement, the problems of proof of harm and causality should not be minimized. However, prosecution for an

environmental crime would not be unique in that regard. Conduct in many other areas — medicine, for example — can be equally complicated and contentious, yet can be and is sometimes prosecuted as real crime. As well, the instances of environmental pollution at or near the level of catastrophic, those of particular interest to us, will normally be those least likely to involve scientific uncertainty and debate. In the name of restraint, it is, in our view, best to be very selective as to the environmental offences prosecuted under the *Criminal Code*, especially those in which serious harm or risk can reasonably be proved beyond a reasonable doubt.

## B. Proving Serious Harm or Danger

It should also be recalled that scientific or technical data and debates alone cannot and should not resolve the harm question. In the first place, the very existence of totally "objective" scientific data is most unlikely; both the questions asked of it and the various positions of scientists will inevitably contain explicit or implicit value assumptions. Secondly, the judging of safety, or the judging of the acceptability of risk is an essentially normative activity. It is therefore a task for a group of people representing a much wider perspective than that provided by scientists and regulators. Both the measurement of risk and its acceptability, but primarily the latter, require a group with access to all the relevant technical information, but also primarily reflecting as wide as possible a contact with the public. As already suggested earlier in this Paper, the normal vehicle to accomplish that in a particular criminal case could be the jury. In determining whether serious harm is established by the evidence beyond a reasonable doubt, the jury would be expected to weigh the scientific data and the acceptability of risk.

Two procedures which are sometimes promoted for use in environmental cases are those of *reverse onus* and *prosecutorial discovery* of the accused. Behind such proposals, especially that of reverse onus, is the view that the regulator's, or plaintiff's, or prosecutor's onus to prove environmental *damage or danger* should shift to the regulated, or defendant, or accused who will be obliged to prove environmental (and health) *safety*. Both the issues of reverse onus and discovery are being addressed in another study under way in the Commission's Criminal Procedure Project. Suffice it to say here about reverse onus applied to our proposed crimes against the environment, that the Commission is not yet in a position to determine whether such offences could meet the stringent conditions laid down by recent case-law in order for *Criminal Code* reverse onus clauses to avoid constituting a violation of the accused's right "to be presumed innocent until proven guilty." That right is now provided for in paragraph 11(*d*) of the *Canadian Charter of Rights and Freedoms*.

It is true that the state as steward or guardian of the public domain has long assumed the right and duty to impose burdens of proof of safety and skill on those who propose to undertake conduct risking the health, safety and welfare of others.

Automobile drivers, airline pilots, engineers and physicians are examples of such professions. As well, a number of regulatory statutes impose burdens on those proposing to undertake certain activities or market certain substances to do prior testing for safety. One example is the *Food and Drugs Act*.[31] Another, though more limited example, is the *Environmental Contaminants Act*.[32] It has also been argued that the burden of proof should shift to defendants to prove safety in civil actions involving environmental risk, especially to provide for injunctions to halt those potentially risk-creating activities.[33] But whatever may be the merit of such proposals (in our view considerable) for civil cases, for regulatory statutes and at the preventive stage, it is quite another matter in criminal cases, given the potentially more onerous penalties for an accused found guilty, and the right of the accused to be presumed innocent.

Nor are we presently convinced that a reverse onus provision for *Code* crimes against the environment would be useful. We continue to be of the view that it is preferable to lose cases and free some who are guilty rather than achieve convictions at the risk of compromising basic principles of justice.

As regards prosecutorial discovery of the accused, suffice it to say that we are not persuaded at this point that such a major procedural reform would be justified. We will have more to say on this subject in our forthcoming Paper on discovery. In the interest of enabling the criminal process to come reasonably close to the truth of the allegations of the prosecution, the prospect of obliging both sides (for example) to file

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31. *Food and Drugs Act*, R.S.C. 1970, c. F-27.

32. *Environmental Contaminants Act*, S.C. 1974-75-76, c. 72, s. 4(6). The Act contains a mandatory reporting requirement for anyone who imports or manufactures more than 500 kg. of a chemical compound for the first time, and any available information regarding danger to human health or the environment must be disclosed. That is provided for in subsection 4(6). In principle therefore, this requirement could be used to shift the evidentiary burden to industry to establish safety. However, it is a very limited reversal. In order to add substances to the Schedule of Prescribed Substances, Environment Canada and Health and Welfare Canada must first "suspect" a danger to health or the environment before they can even begin to investigate and collect data (subsection 3(3)); before a producer may be obliged to disclose information, the two ministries must have "reason to believe" a substance will constitute a significant danger to the environment or health (subsection 4(1)); only when Environment Canada and Health and Welfare are "satisfied" that a substance is or will constitute a "significant danger" to the environment or health may it be added to the Schedule of Prescribed Substances (subsection 7(1)); it may be so regulated only when it is determined that no other existing federal or provincial law can adequately control that substance (subsection 5(2)). An unpublished Study Paper in this Protection of Life Series entitled "Selected Environmental Statutes," by Susan Tanner (1984), at pp. 77-80 and 115-21) has noted the following about that Act: the reporting requirement applies only to *new* chemicals; the agency has never in fact invoked paragraph 4(1)(*c*) of the Act to require testing; systematic testing requirements have never been developed or imposed; the Act only applies to individual chemical substances (not biological pollutants); and the chemicals are regulated in isolation, not in the context of other pollutants in the environment.

33. Injunctions are undoubtedly one of the most useful legal tools for environmental and health protection, but they are only rarely provided. They consist of court orders prohibiting a defendant from starting or continuing something (for example, releasing sewage), or ordering him to do something (for example, install new waste disposal equipment in a factory). Injunctions may be permanent or temporary. To obtain a temporary (or interlocutory) injunction, it has to be established that if the activity goes ahead, the plaintiff will be exposed to imminent and irreparable harm, and that granting the injunction during the trial period will not cause the defendant irreparable harm. Injunctions are granted only rarely for the most serious cases, and not when economic loss can be calculated and damages are thought to provide an adequate remedy.

written summaries of the evidence of the experts they intend to call and disclosure of all the data relied on, is attractive. Yet such an approach may very well violate the accused's right not to incriminate himself. It is, in our present view, preferable to use existing procedural avenues to their fullest, such as subpoenas and search warrants.

### C. Conclusions

1. The measures necessary to enforce *Code* prohibitions against environmental crimes should not, in themselves, contravene fundamental values. Among these values and principles are: the avoidance of cruel and unusual punishment; the treating of like cases alike; equality under the law; determining guilt or innocence according to the available evidence; the presumption of innocence; the right of the accused not to incriminate himself; and the presumption that an act is not a crime unless the law specifically says so.

2. A potential reform such as *reverse onus* could, in the context of environmental cases, violate the accused's right to be presumed innocent, and another potential reform, that of *prosecutorial discovery of the accused*, may in environmental cases violate the accused's right not to incriminate himself.

3. Despite the technical complexities and scientific debates, as well as the problems and burdens of proof, there is good reason to conclude that some prosecutions for crimes against the environment could succeed, both without procedural reforms such as reverse onus, and without contravening the fundamental values referred to above in Conclusion 1.

## V. The Effectiveness Test: Making a Significant Contribution

### A. Repudiation and Deterrence

Even when the conduct in question has passed the previous tests of a real crime, there remains another all-important one. Would characterizing and treating some serious environmental pollution as real crime within the *Criminal Code* make a significant contribution in dealing with the harms and dangers thereby caused? Our response is in the affirmative.

It is worth underlining again a point made earlier. What is not being claimed is that this proposal represents the whole legal response to environmental pollution, or that it would always be the best response. On the contrary, in our view, resort to the

*Criminal Code* should always be a last resort. In most cases, other avenues will be more appropriate, whether civil remedies, regulatory statutes and controls, or various administrative law incentives and sanctions. It is quite conceivable, even desirable, that there would be relatively few prosecutions brought under a new *Criminal Code* prohibition, which like criminal law generally, should be resorted to with great restraint; less onerous methods of preventing pollution and achieving compliance should normally be preferred.

That new *Code* offence is not being proposed as a competitor to those other existing and evolving approaches and mechanisms. It is certainly not meant, for example, to supersede the various federal and provincial environmental statutes, or limit the responsibilities of the various agencies which administer them. On the contrary, it is this Commission's view that there is presently a "gap" in our society's legal defences against environmental pollution, and that the availability of this new *Code* offence would fill that gap and thereby supplement, reinforce and complement those other approaches and controls, not threaten or limit them.

Existing and evolving mechanisms and controls have clearly defined, legitimate and very important goals. Civil remedies in the environmental arena are directed primarily towards the goal of *compensation* for damage done, or the halting of dangerous conduct by means of injunctions. Regulatory statutes and administrative controls, remedies and incentives, generally speaking, have as their goal the achieving of realistic day-to-day *compliance* with pollution standards and limits. The various existing and emerging administrative practices involving, for example, licensing, financial incentives, persuasion and informal negotiation (subjects being addressed in separate Commission Papers) are well beyond the concerns and goals of criminal law. However, in our view there is a serious gap in that one important goal, one not a major focus of either civil remedies or regulatory/administration approaches, is not really provided for. Put simply, it is the important one of *value underlining*, by means of repudiating and deterring instances of gross environmental pollution.

It would, of course, be wrong to imply that there is no overlap in the goals and purposes of all these approaches. Civil remedies and administrative law approaches in this area obviously contribute something to the underlining of the fundamental values of a safe environment, the sanctity of life and bodily integrity. Criminal law can have "subgoals" of compensation and compliance. It is of course a question of emphasis, of major focus — and the major focus of criminal law (and only criminal law) is on the highlighting and protecting of the fundamental values of our society, by providing in the most serious, emphatic and onerous way available, for the repudiation and deterrence of those who have threatened or might otherwise threaten them. As the next chapter will confirm, we do not presently do so in a clear, emphatic manner within the confines of the present *Code*.

There is no reason to think that treating some environmental offences as real crimes would be less effective in meeting the purposes of criminal law than is the case with other criminal conduct. One of the strongest ways available to us as a society to say

in effect we repudiate and abhor this behaviour is to say it clearly and unambiguously in the *Criminal Code*. Not to do so is to imply that instances of gross pollution with no overriding social justification could be taken to imply that we as a society do not, in fact, consider it seriously wrongful. A related goal and standard by which to measure effectiveness is that of deterrence. Repudiation and deterrence are inevitably related. Whereas the motivating mechanism associated with repudiation is the reinforcement of moral inhibition, the motivating mechanism in deterrence is the fear created by the threat of detection and conviction. If the deterrence is effective, fear should have negative and positive effects: negatively individuals, groups, agents and employees would be cautioned to refrain from gross environmental pollution likely to lead to charges against them; positively, they would thereby be further motivated to take steps to put in place better policies, training, supervision, education, and pollution prevention mechanisms and controls, in order to guard against future environmental offences.

## B. The Conditions: Likelihood of Apprehension, Publicity, Severity of Sentence

There are, of course, a number of important conditions to making deterrence effective in this and other areas. One is that there must be at least the *likelihood of apprehension and conviction* if the criminal act is committed. Clearly, there must always be a degree of discretion allowed in our judicial system; full enforcement is neither desirable nor realistic. Nevertheless, it has long been acknowledged that the effectiveness of a deterrent is derived less from its severity than from its certainty. We are, of course, aware that the likelihood of apprehension and conviction depends to a large degree on factors other than the mere prohibition or nonprohibition, by the *Criminal Code*, of a certain conduct. Much will depend on the availability of needed resources by the environmental agencies and Attorneys-General departments, on political will and so forth.

A second condition for effective deterrence is that of *publicity*. Obviously the criminal punishment of environmental pollution cannot be an effective deterrent if its likelihood and severity are not known. As the Commission observed in an earlier Working Paper: "Denunciation of conduct may be as appropriate for corporations as for natural persons. This forces us to find different ways of denouncing conduct, possibly by using large fines or adverse publicity."[34] It is frequently the processes of arrest, prosecution and trial which will bring more acts into the open and expose offenders to censure. In this regard one commentator has observed:

> The deterrent effect of pollution prosecutions does seem to be considerable. That is, it is highly likely that vigorous prosecution of a certain type of polluter will be noticed by other polluters of the same type. The polluter on the sidelines quickly begins to envision

34. Law Reform Commission of Canada, *Criminal Responsibility for Group Action*, [Working Paper 16] (Ottawa: Information Canada, 1976), p. 41.

and assess his posture in similar litigation. Often the result is either a quiet but prompt cleanup or an inquiry to the prosecuting authorities as to just what he must do in order to avoid being next.[35]

A concrete and novel example of publicity incorporated into a sentence was recently provided by the sentence imposed on an American corporation convicted of pollution. The company had illegally dumped highly toxic carcinogenic waste into the sewers of Los Angeles. The company did not contest the charges of having authorized the dumping. Not only was a company manager sentenced to four months imprisonment, but the company was ordered to publish an announcement in the *Wall Street Journal* describing its crime against the environment.[36]

A third condition for effective deterrence of pollution crimes concerns the *severity* of the punishment. While certainty of punishment is undoubtedly more deterring than its severity, common sense tells us that potential offenders will weigh both. The severity of the penalty should be linked to the moral dimension of the offence. The more intentional and harmful or endangering the pollution, the more severe should be the penalty. A relatively small fine, easily absorbed as a business expense, is not likely to contribute much to deterrence or serve as an effective sign of societal repudiation. In our view, imprisonment, as well as sufficiently large fines, should be available as the major sentencing options.

Restitution to "victims," in this case the environment itself and those whose interests have been seriously interfered with as a result, is not a goal exclusive or even central to the purposes of criminal law. However, as many recent studies and proposals have maintained,[37] restitution to victims is a legitimate and important aspect of criminal law sentencing and adds to its effectiveness. If an activity qualifies as a real crime, then when relevant the state should not only be concerned to condemn the wrong and the wrongdoer, but could also assist the wronged victim by providing in the sentence for the "putting right" of the harm done. Restitution or redress of injury for these crimes would often take the form of, for example, cleaning up a serious spill or unauthorized hazardous waste disposal site, and returning the land or other resource to the safe state it had before the offence. The Commission proposed the following in its 1976 Working Paper, *Criminal Responsibility for Group Action*:

> ... corporate criminal conduct damaging general interests in resources shared by the community as a whole, like clean air and water, should in some cases attract a judicial order requiring a corporation to pay damages for public injury.[38]

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35. Kenneth A. Manaster, "Perspective: Early Thoughts on Prosecuting Polluters" (1972), 2 *Ecology Law Quarterly* 471, p. 479.

36. "Publier ses crimes," *Le Devoir*, February 2, 1984.

37. That philosophy was acknowledged and underlined in the 1984 government policy paper, *Sentencing* (Ottawa: Government of Canada, February 1984), and in Bill C-19, the *Criminal Law Reform Act, 1984*. It was also endorsed in this Commission's 1976 Report to Parliament, *Guidelines: Dispositions and Sentences in the Criminal Process*. In the government policy paper, *Sentencing*, restitution is described as an important expression of the primary purpose of sentencing, although it is acknowledged that the present provisions for restitution and compensation in the *Code* do not effectively and consistently serve that purpose.

38. *Supra*, note 34, p. 47.

It is then our view that the effectiveness of all the other preventions and controls of environmental pollution can only be complemented, not lessened by the availability and (restrained) use of a new *Criminal Code* provision prohibiting seriously harmful pollution which is grossly negligent, reckless, or intentional. Having this additional tool would fill a wide hole in the legal response to the pollution problem, a hole which only the criminal law can effectively fill.

## C. A "Generally Worded" Formulation

To be as effective as possible, a *Criminal Code* prohibition against environmental pollution should be formulated in general terms as regards the substances, contaminants, and range of activities which could fall within its scope. The advantage thereby gained is that the offence could be as all-inclusive as possible, not excluding as a potential focus of criminal liability a specific form of conduct, a particular element of the environment, or a specific substance or contaminant only because they were not expressly referred to in the *Code* offence. If each substance, emission standard or type of activity had to be expressly listed in a *Criminal Code* offence, it would have to be revised each time a new pollutant, hazard or activity not originally foreseen came into existence, and each time a new emission standard was formulated, or an existing one revised. The proper place for such specifics is not in the *Criminal Code*, but in a large body of environmental statutes and regulations, the serious violation of which we have suggested as a necessary condition for criminal liability. A number of examples of generally worded *Code* offences already exist, some having been proposed by this Commission. Assault is one example. It does not spell out in detail and in advance the many specific acts which could qualify as the physical contact or threats constituting assault. Nor does the proposed *Code* offence of vandalism add specifics to the general prohibition against conduct which damages, destroys or renders useless or inoperative the property of another.

To be as effective as possible, a *Code* prohibition of pollution should accomodate a wide range of activities. The environment and consequently human life and health, can after all, be harmed or endangered either by direct acts or in the course of many kinds of activity. The primary harm and danger points as regards a wide variety of potentially hazardous goods, wastes and contaminants are their manufacture, their transportation, their use, their storage and their disposal. In the interests of both comprehension and specificity, all these activities and stages which could in some circumstances, attract criminal liability, should be expressly included in the formulation of the *Code* offence.

## D. Conclusions

1. Resort to the *Criminal Code* for the prosecution of environmental pollution should always be a last resort, reserved for the most serious, most flagrant offences. In most cases other controls and sanctions will be more appropriate, including civil remedies, regulatory statutes and administrative law mechanisms.

2. *Code* offences against environmental pollution should not be designed or used to supplement or compete with other legal and nonlegal mechanisms and approaches. While the latter generally have goals of compensation or compliance, the distinct and crucially important goal of *Criminal Code* prohibitions should be that of underlining fundamental values by repudiating and deterring gross environmental pollution.

3. Effectively to meet the goals of repudiation and deterrence there are a number of conditions: the likelihood of apprehension and conviction; the public exposure of offenders; and the severity of the sentence.

4. Severe fines and even imprisonment should constitute the major sentencing options, but because restitution and redress of injury are sometimes important subsidiary goals of criminal law, a sentence for a *Code* offence could consist in or include, for example, the clearing up of a serious spill or hazardous waste site.

5. A *Criminal Code* prohibition of environmental pollution should be *generally worded*, avoiding reference to specific substances and contaminants, and particular and detailed acts or omissions. Those specifics should be left to the prohibitions and standards of federal and provincial statutes, the flagrant and dramatic violation of which would be a necessary condition for a conviction under the *Code*.

6. The general range of activities which *Code* offences against the environment should expressly prohibit would be conduct seriously damaging or endangering to the environment:

(a) by means of direct physical acts; or,

(b) in the course of the manufacture, transportation, use, storage or disposal of any hazardous or potentially hazardous goods, wastes or other contaminants.

# CHAPTER TWO

# The Present *Criminal Code* and Crimes against the Environment

## I. Options and Criteria

If some acts or omissions seriously damaging or endangering to the environment do meet the tests of real or *Code* crimes, the next question is whether present sections of the *Code* clearly and effectively prohibit them. Although the term "environment" (or equivalents) is never referred to in the present *Code*, various of its offences could in principle be used to denounce, condemn and penalize crimes against the environment. The strongest potential candidates are: criminal negligene (section 202); common nuisance (section 176); mischief (section 387); causing disturbance (section 171); offensive volatile substance (section 174); explosive substances (sections 77 and 78); and offences against animals (sections 400 to 403). There are in our view three options available.

(1) One is to prosecute environmental crimes by means of one or another of these existing *Code* offences, left unchanged.

(2) A second option would be to revise one or another of these offences to include a more explicit and effective focus on the environment.

(3) A third option is to leave existing *Code* offences unchanged and formulate an entirely new offence prohibiting crimes against the environment.

We will leave until the end of this section our conclusion and proposal regarding those three options. However, it is important at the start to suggest the criteria which should apply in the evaluation of each section and in the choice of option.

(1) One criterion should be whether the wording, focus and scope of the present *Code* offence under consideration clearly and directly enough prohibits and sanctions crimes against the environment.

(2) A *second* is whether and to what degree the present *Code* offence is focused on a special form of conduct and interest different from, and perhaps incompatible with, the goal we outlined for a crime against the environment. It could be that even "tacking on" an environmental focus to a given *Code* section would blunt and weaken that section's original purpose and effectiveness.

(3) A *third* criterion should be whether a given *Code* section is presently equipped, or could be revised without major surgery, to include all the considerations already indicated specific to crimes against the environment — for example: the special scope of the offence as regards "environmental rights"; the scientific/technical considerations; the problems of proof; the importance of reference to statutory standards and prohibitions; the criteria for determining serious harm; the role of the jury; the special *mens rea* considerations; the importance of endangering and of duties and omissions. If "major surgery" would be the only way to revise a present *Code* offence to include within it explicit prohibitions of crimes against the environment, then the argument for a new and special environmental offence is stronger.

(4) A *fourth* criterion, more or less implied in the other three, is whether the interest *directly* protected by an existing *Code* prohibition is that of environmental quality and the fundamental value of a safe environment. If the interest directly in mind is either that of *life and health* (without any relation to environmental pollution), or that of *property*, then that section is less likely to be appropriate as a vehicle for prohibitions against environmental crimes. It is, of course, true that our proposed scheme gives a high priority to the protection of human life and health, but not because they are the interests directly and exclusively in mind for this new offence. The implications for human life and health of an alleged crime against the environment are rather the major test of the harmfulness of that polluting conduct. But there are already enough *Code* prohibitions of conduct directly harmful or endangering to human life and bodily integrity. It is in the first instance the environment itself which is directly at issue and being protected in our proposed new offence.

(5) A *fifth* criterion should be that *Code* offences which have in as their focus primarily private property interests are likely to be inadequate, even if revised, for prohibitions of environmental crimes. As indicated earlier in this Paper, private property rights are best protected within the compensatory framework of civil law, and by *Code* offences specifically directed to prohibiting conduct damaging or endangering to private property.

It should not be surprising if we conclude that the *Criminal Code*, in its present arrangement and formulation, is somewhat narrow and limited regarding the harm and values envisaged. Much of what is now possible as regards pollution damage and risk simply was not possible or foreseen by those who framed the *Criminal Code* in the late 1800s. Many of the present-day industrial contaminants did not exist, and industrial waste was considerably less in volume. Environmental pollution did of course exist, but relatively little was known about ecology or the dynamics of how pollution does its harm. The environment itself was not, generally speaking, seen as threatened enough or valuable enough for legislators to establish criminal liability for those who seriously damaged or endangered it.

Also not surprising, therefore, is the fact that *Criminal Code* offences are seldom used as the basis of prosecutions for conduct seriously harmful or endangering to the environment. Even more seldom are such prosecutions successful.[39] Undoubtedly a part of the explanation lies both in the high standard of proof required in criminal cases, and in the existence of a large number of environmentally related federal and provincial statutes and municipal by-laws. Most of that legislation is relatively recent, thus post-dating the formulation of the *Criminal Code*. However, part of the explanation may also lie in the wording and focus of the present *Code* offences.

## II. The Relevant *Code* Offences

### A. Criminal Negligence (Section 202)

In principle the prohibition of criminal negligence could be one of the most important *Code* provisions for prosecuting offenders against the environment. Subsection 202(1) provides in part that "[e]very one is criminally negligent who ... shows wanton or reckless disregard for the lives or safety of other persons." Whether or not it will be retained in the revised *Criminal Code* remains to be seen, but in its present state it has two serious limitations. A first problem with criminal negligence concerns not only environmental offences, but has to do also with the generally unclear meaning of the offence of criminal negligence itself.[40]

The second limitation of criminal negligence in the environmental context is that the main element of the offence is not conduct involving direct and unjustifiable risks to the environment, but to "the lives or safety of other persons." The fundamental value of a safe *environment* is not even indirectly referred to. Some reckless environmental destruction or endangering does *not* necessarily also endanger human life and

39. A good example of this lack of success is the decision in the *American Iron and Metal Company* case, *infra*, note 43, involving a prosecution for the *Code* offence of mischief, subsection 387(4).

40. What causes the difficulty is that the title of the section is "Criminal Negligence," and the first line of the text reads: "Every one is criminally negligent who ...," but then the section describes the offence as being recklessness. One is criminally negligent if one "shows wanton or reckless disregard for the lives or safety of other persons." While negligence can include failing to take reasonable care through inadvertence, or simply through carelessness, recklessness (at least in the legal context) is often thought to have a different and narrower meaning, that of the *conscious* taking of serious and unjustifiable risks, the offender having the foresight of their probability. In Canada, the test for criminal negligence is clearly that of recklessness. Some define recklessness subjectively (requiring actual foresight of the accused as to the prohibited consequences of the conduct); others define it objectively (as a deviation from the standard of the reasonable man). The Commission has addressed these problems especially in: *Homicide*, [Working Paper 33] (Ottawa: Minister of Supply and Services Canada, 1984), pp. 53-7; "Omissions, Negligence and Endangering," *supra*, note 27.

safety and yet may be criminal for reasons indicated earlier. While criminal negligence could be a useful section for cases in which there is a clear link between the criminally reckless endangering of the environment and the lives or safety of human beings, it would hardly be as direct and explicit as a *Code* section saying exactly that.

## B. Common Nuisance (Section 176)

In principle, up to a point, the "common nuisance" offence of the *Criminal Code* could be a useful one to prohibit crimes against the environment. As defined in *Code* subsection 176(2), one commits a common nuisance if one "... does an unlawful act or fails to discharge a legal duty and thereby (*a*) endangers the lives, safety, health, property or comfort of the public, or (*b*) obstructs the public in the exercise or enjoyment of any right that is common to all the subjects of Her Majesty in Canada."

In effect, the *Code* offence of common nuisance is a criminal law version of the *civil* action of public nuisance. Writing of public nuisance in the civil sphere, one commentator noted:

> When a nuisance is so widespread and affects so many personal interests that it would not be reasonable to expect one person to take proceedings against those responsible, it is considered to be a public nuisance. It is impossible to lay down any hard rules on the nature and size of the class that must be affected before a nuisance will be considered public.[41]

As for the *criminal* offence of common nuisance, there is little specific guidance available as to the size of the group which must be affected. A second consideration involved in determining that a public nuisance could be *criminal* in nature and not just civil, is presumably the degree of harm or risk. Presumably for a crime of common nuisance, the act or omission should be a "more serious" endangering of the "lives, safety, health, property or comfort of the public" than would necessarily constitute an act of public nuisance in the civil sphere. The act or omission should also, of course, meet the other real crime tests referred to earlier. Section 176 of the *Code* imposes a limitation on what can be characterized as common nuisance in that the act causing the nuisance must itself be an "unlawful act" or a failure to discharge a "legal duty." In the context of environmental crimes, that test would not normally be insuperable in that the seriously harmful or endangering conduct of interest to us will normally be a serious or flagrant violation of an environmentally related statute or common law duty. This section, in addressing itself to wrongs done to the public generally and to commonly held rights, to some degree escapes the narrow individualistic conceptions of property, physical integrity and wrongs between neighbours, and suggests the protection not only of lives but also of the "quality" of life. In actual fact, although some years ago there

41. R. Franson and A. Lucas, *Environmental Law Commentary and Case Digests* (Toronto: Butterworths, 1978), p. 354.

were a number of convictions for the crime of common nuisance for conduct endangering public health, little use has been made of this section in recent years against conduct endangering environmental quality, or public health.[42] Its major limitations as regards crime against the environment are that it puts no explicit focus on the environment and environmental quality, nor is it equipped without major revisions to accommodate the many considerations special to crimes against the environment.

## C. Mischief (Section 387)

### (1) The Present Mischief Offence

Although we are interested primarily in section 387 of the *Code*, it should be noted that this is the first section of what could be called a "Code within a Code," that is, the whole of Part IX. Part IX comprises twenty sections, sections 385 to 403, and is entitled, "Wilful and Forbidden Acts in Respect of Certain Property." It contains five groups of offences under separate headings: "Mischief," "Arson and Other Fires," "Other Interferences with Property," "Cattle and Other Animals," and "Cruelty to Animals." Mischief constitutes the key offence, and the others can be divided into two classes: one consists of particular *ways* of committing mischief (for instance, arson); the second involves offences which damage particular *types of property* (for example, injuring cattle).

The major purpose of the various mischief provisions is to underline the value of respect for the property of others. Certain provisions in section 387 and elsewhere in Part IX underline certain other values as well. One of these is *respect for human life and safety*, as expressed for example in paragraph 387(1)(*b*), making it a crime to render property dangerous. A second value is that of *honesty*, as indicated by paragraph 386(3)(*b*) which provides that an owner of property commits an offence if he destroys or damages it with fraudulent intent. A third value is that underlined in sections 402 and 403 regarding *cruelty to animals*.

According to section 387 in the present *Criminal Code*, there are four ways in which the main offence of mischief can be committed. One is by destroying or damaging property. A second is by rendering property dangerous, useless, inoperative or ineffective. A third method is that of obstructing, interrupting or interfering with the lawful use, enjoyment or operation of property. The fourth manner of committing mischief is

42. One commentator (Hélène Dumont, "La protection de l'environnement en droit pénal canadien" (1977), 23 *McGill Law Journal* 189, p. 192) observed the following in that regard:
[TRANSLATION]
Judicial decisions already showed concern for the quality of life in the last century and prove that this concept would be most useful in dealing with acts likely to affect public health or damage the vital environment .... Recent prosecutions for this offence have seldom dealt with the mischief of pollution or the harm caused to public health.

by obstructing, interrupting or interfering with a person in the lawful use, enjoyment or operation of property. This last means focuses on the protection of persons in the use of property rather than protection of the property itself.

A person cannot commit mischief against his own property. The only exception to that general rule is if one damages or destroys one's own property for fraudulent purposes according to paragraph 386(3)(*b*).

In principle, the mischief section of the *Code* could be the basis of prosecutions for polluting activities. Its focus on damaging, destroying or rendering dangerous property, both private and public, by reckless conduct, with or without actual danger to life, would appear to fit the specifics of many destructive or endangering environmental offences. Subsection 387(2), for example, could encompass the cause-and-effect relationship between pollution conduct which destroys, damages or renders property dangerous, and conduct which causes actual danger to life. However, in fact the mischief section is *not* used in practice as the basis of prosecutions against pollution crimes.

The major limitation of the mischief offences is the fact that they do not explicitly refer to the natural environment itself or to natural resources (such as air, water, land, vegetation, and so forth), but only to "property." The main value being underlined is respect for the property of others. That is not of course a limitation of the section itself, since that is a quite appropriate function of the mischief section; but from the perspective of environmental quality and protection, it is too narrow and confining to consider the environment only insofar as property is damaged or endangered. As well, those who damage, destroy or endanger land, for example, can only be prosecuted when the land is owned by someone else (whether private individuals or the Crown), but not when the owner himself shares some of the responsibility for the resulting damage, destruction or dangerousness.

An example of the limitations of the mischief provision in this regard can be seen in a recent Québec decision.[43] It involved the first occasion in Québec of a prosecution under the *Criminal Code* for what the Québec Minister of the Environment called an "ecological crime." The charge was brought under subsection 387(4) of the *Criminal Code*, mischief in relation to private property. Accused were both the waste disposal company and an engineer of the firm which had waste to be removed. It was established that the company's engineer had illegally authorized a waste recycling firm to pour at least 500,000 gallons of highly toxic used oils into a trench on his company's own land. It was proved to the satisfaction of the court that the ground was seriously polluted, the evidence indicating that the contaminants were poured into the ground (to save the company the expense of transporting it and having it burned), then covered with a thin layer of earth. It was established to have been deliberate, and that the resulting danger to public health was serious, since the toxics would eventually reach the water-table.

43. *Le Procureur Général de la Province de Québec*, c. *American Iron and Metal Company (1969) Ltd., et André Leduc*, Cour des Sessions de la Paix, Montréal, February 11, 1983 (unreported).

However, despite the deliberate and serious pollution, the court held that it was not mischief according to section 387 of the *Criminal Code*. It was so held because mischief had not been committed against the property "of another," and that there was therefore no victim. Since the company which owned the land into which the contaminants were illegally poured was itself a knowing accomplice to the damage it suffered, it was not a victim. The waste recycling company had indeed seriously damaged by pollution another's property, but that "other" was in effect an accomplice to the conduct.

The judge who decided this case greatly regretted not being able to convict the accused, and strongly reprimanded the company which owned the property for being unconcerned about environmental consequences, taking no precautions and then lying to the Ministry of the Environment about its conduct. However, because the Crown had not proved its case according to the terms of the mischief offence, the real victims in this instance, the environment and those people who, at some point in the future, would be exposed to resulting health hazards were left unprotected and uncompensated, and the conduct of their "assailants" went unpunished and unrepudiated. In his ruling, the judge implicitly pointed to the inherent limitation of the mischief offence used for pollution offences when he noted:

> [TRANSLATION]
> This led the court at the time to ask the Crown whether there was perhaps not some way of calling it mischief against society in general or against persons so far unknown.[44]

### (2) The Commission's Proposals for Mischief

In Working Paper 31, entitled *Damage to Property: Vandalism*,[45] the Commission proposed a major restructuring of the *Criminal Code*'s mischief section (along with the whole of Part IX). Our next question is whether those proposals would provide the revisions needed clearly and effectively to prohibit crimes against the environment. Our response is that such a goal was neither the intention behind those proposals, nor is it the result. Those recommendations are intended rather to simplify the present confusion and overlap in the form and substance of Part IX mainly in order to focus directly and exclusively on the main value underlined in the mischief offence — *respect for the property of others*. However, as already emphasized, the value at stake in our proposed crime against the environment is something very different — that of *a safe environment*. A brief look at four of the proposals in the *Vandalism* Paper will illustrate why the revised mischief offence, to be known as vandalism, would not be an appropriate vehicle for pollution offences in which property is not at issue.

One of that Paper's proposals is that the new offence of vandalism should no longer cover *risks to safety*, but only conduct which damages, destroys or renders

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44. *Id.*, p. 22.

45. Law Reform Commission of Canada, *Damage to Property: Vandalism*, [Working Paper 31] (Ottawa: Minister of Supply and Services Canada, 1984).

property useless.[46] Conduct which "renders property dangerous," according to paragraph 387(1)(*b*), would not be covered in the revised vandalism section. That would also apply to risks to the safety of others caused by damage to one's own property. All of this is consistent with the goal of putting the focus on respect for the *property* of others. However, in some instances of environmental pollution, there *will* (as a result) be harm or risk to the natural environment, the property of others and (also as a result) directly or indirectly to the health and safety of people. For pollution offences, it would be artificial to make the same hard and fast distinctions as we made regarding vandalism.

A second, related recommendation made in the *Vandalism* Working Paper is that the offence should more sharply focus on, and be restricted to, conduct *affecting the property of others*.[47] It would exclude, for example, fraudulent destruction of one's own property (best dealt with under the rules of fraud), and would exclude *risks* to other property created by acts directed at one's own property (best dealt with by a more general offence covering all activities creating risks to property). However, by the scope of vandalism being restricted exclusively to the *property of others* (as it should), conduct which for example seriously contaminates one's own land, thereby creating serious health risks for others, would not fall within the scope of vandalism. As well, given the fact that the most serious aspect of some pollution conduct is the *risks* it creates, an offence which excludes the dimension of risk is correspondingly less suited as the vehicle to prohibit and sanction crimes against the environment.

A third proposal regarding the new offence of vandalism is that it should only apply when the damage to another's property is one "without the other's consent."[48] It presumes, of course, that the damage can be confined to that other person's property. That being so, only that other person is the victim and should be entitled to consent. However, in cases of seriously harmful pollution damage it is often otherwise. The owner of land may allow another to pollute his land, but the owner's consent cannot be assumed to include the consent of other potential and unknowing victims whose health or other interests might be put at risk by that pollution.

An important aspect of a fourth proposal made in the *Vandalism* Working Paper is quite consistent with environmental concerns. It is that the distinction between private and public property be abolished with reference to the offence of vandalism.[49] The present mischief offence promotes respect for both, but imposes a higher penalty for mischief against public property than against private property. The Commission noted that this distinction is now blurred in modern society, given the interaction between public and private sectors, and the pervasiveness of government activity. However, for crimes against the environment there is a still more fundamental reason for the abolition of that distinction. From this perspective, the essential consideration is *not the proprietary interest at all*, but the nature and fragility of the resource in question.

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46. *Id.*, Recommendation 1, p. 31.
47. *Id.*, Recommendation 3, p. 35.
48. *Id.*, Recommendation 8, p. 38.
49. *Id.*, Recommendation 5, p. 37.

## D. Dangerous Substances (Sections 77 to 79)

At first sight, the conduct prohibited by these sections appears to make it a suitable provision under which to prosecute some environmental crimes. After all, as well as substances manufactured specifically as explosives (for example, dynamite and ammunition), some liquids or gases can *become* explosive if transported, stored or disposed of wrongly or negligently. As well, sections 77 and 78 describe the offence explicitly in the terms of a breach of the duty to use reasonable care in dealing with explosives, a clear indication that the *Criminal Code* considers the legal duties of those so involved to be of a very high order.

However, two questions arise. The first is whether the offence is really directed to the protection of the environment. The second is whether the scope of this offence extends to the inclusion of that wider meaning of "explosive substance."

To the first question, the answer must be in the negative — the scope of the offence in its present form includes death, risk of death, bodily injury or damage to property. While serious harm to an element of the natural environment is not excluded, it is clearly not the prohibited conduct of direct and major interest.

To the second question, the answer must also be in the negative. Both the wording of the offence and relevant case-law suggest that applying it to substances other than explosives in the strict sense would be stretching its meaning and scope well beyond what was intended. "Explosive substances" appears to mean exactly what it says — substances made to be explosives. All prosecutions to date under this offence have involved explosives strictly speaking, especially dynamite.

An example is a 1907 decision involving the negligent transportation of dynamite.[50] A railway car containing dynamite exploded, killing two people and injuring forty others. That case is illustrative of several points relevant to the concerns of this Paper. First of all, it provides an example of a prosecution under the *Code* being the preferred response to the negligent transportation of a dangerous substance, even though an appropriate regulatory statute existed. In this case, a grand jury preferred an indictment against the railway and charged it under the *Criminal Code* with both nuisance and carrying explosives without adequate precautions. On conviction, the railway was fined $25,000, whereas under the *Railway Act*[51] the maximum fine could have been only $500.

Another conclusion this decision permits is that since the *Code* already imposes such a strict duty and severe penalty for offences involving explosives such as dynamite, it would be legitimate and reasonable for conduct involving other substances equally or more dangerous to the environment and human health to attract similar or more onerous prohibition and criminal liability in the *Criminal Code*.

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50. *R.* v. *Michigan Central Railway* (1907), 10 O.W.R. 660.

51. *Railway Act*, R.S.C. 1970, c. R-2.

These sections could, of course, be revised to include a prohibition of conduct seriously damaging or endangering the environment by means of explosive substances, the latter explicitly expanded to include explosives in the wider sense. However, given that there are many activities and substances dangerous to the environment and health other than explosives, it would in our view complicate matters and blunt the impact for the protection of environmental quality if each "kind" of environmentally hazardous substance or activity would have its own distinct *Code* offence. It would appear preferable to have one general offence prohibiting serious environmental pollution, without reference to specific substances or detailed activities.

## E. Offensive Volatile Substances (Section 174)

It has been suggested that an offender commiting certain forms of air pollution might fit within the definition of paragraph 174(*a*), everyone having "... in his possession in a public place, or who deposits, throws or injects ... an offensive volatile substance that is likely to alarm, inconvenience, discommode or cause discomfort to any person or to cause damage to property ...." However, the full text of this section makes such an interpretation unlikely. The offence is clearly directed against creating disturbances in public places by means of stink-bombs, tear-gas and so forth. Public peace and property are clearly the interests or values being protected.

## F. Causing Disturbance (Section 171)

In principle, this section could be used to prohibit *noise* pollution, in view of paragraph 171(1)(*d*), which makes it a summary offence to disturb "... the peace and quiet of the occupants of a dwelling-house by discharging firearms or other disorderly conduct in a public place ...."

However, careful consideration of the wording and context of the whole offence would reveal no real support for such an extension. In fact, the thrust of the offence is to prohibit disturbances between neighbours, confirmed by the references to "dwelling-houses," the reference to evidence provided by a peace officer, to fighting, screaming, being drunk, loitering and so forth. Not surprisingly therefore, the offence in practice has only served as the basis for prosecutions of rowdy behaviour by individuals affecting those in the immediate neighbourhood. While noise "pollution" caused by industrial activity could possibly fit into that designation, one could not say that is the kind of activity primarily or explicitly prohibited.

As with most of the other *Code* offences considered, this one as well is not environment-centred. It is the peace and quiet of the "occupants of a dwelling-house" which is at issue here, not the environment itself. Given that noise pollution as such is not in reality an offence against the environment, but against the comfort and convenience of people, it should not fit within the scope of the crimes against the environment envisaged in this Working Paper.

## G. Offences against Animals (Sections 400 to 403)

Animal life is obviously a major and essential element of the natural environment and therefore seriously harmful or endangering conduct towards wildlife of all kinds could be prohibited by the *Criminal Code*, especially if there are serious implications for human life and health. But sections 400 to 403 of the present *Code* have somewhat other purposes. Those sections prohibit two important types of conduct, namely injuring or endangering cattle and other animals insofar as they are the *property* of others (sections 400 and 401), and *cruelty* to (mainly domestic or captive) animals (sections 402 and 403).

However, a third goal and value is not addressed by these sections, namely, the preservation and protection of wildlife from serious harm and danger. Within this category, two types of serious harm may be appropriate for prohibition by the *Code*. One would be damage or destruction which causes or risks serious ecological destruction. An example would be the decimation (by a form of pollution, for example) in a particular area, of a species of wildlife needed by other desirable forms of life for their survival. Another related type of conduct could be that which causes or risks the complete extinction of a species of wildlife. Serious harm or risk to an *individual* wild animal should not normally merit prohibition by the *Code*. A major reason for so concluding is that at certain times, and under certain conditions, it is presently legal to hunt and kill a specified number of some species.

In our view, only this third goal and value merits inclusion within new offences against the environment. The other two (important) goals do not really fit within environmental concerns. Injuring and endangering cattle or other (domestic) animals insofar as they are someone else's property, according to sections 400 and 401, is something other than the conduct or focus of interest to us here. In those sections, the goal is primarily to protect animals insofar as they are the property of others, making such harmful or endangering conduct a form of mischief. Cruelty to animals according to sections 402 and 403 is undeniably related to our concern, yet is not quite the same thing. The eight summary offences in these sections in most cases assume it is the *owner* who will commit them against his own animals. They include: inflicting unnecessary pain; failing to provide adequate food and shelter; administering poison; promoting trap-shooting; keeping a cock-pit for fighting birds.

In the *Vandalism* Working Paper, the Commission recommended that those offences against domesticated animals belonging to others (sections 400 and 401) will be adequately covered by the proposed offence of vandalism. Since vandalism is an offence against the property of others, these offences against animals as property should not need separate sections. As for the offences of cruelty to animals in captivity, it was proposed that they be contained in a separate part of the *Code*, not yet specified. It is now proposed that only offences against animals which cause or risk serious ecological disruption or the extinction of a species of wildlife should be included in the prohibited conduct of new *Code* sections dealing with crimes against the environment.

## III. Pollution As Crime in Other Countries

In view of the foregoing it is reasonable to conclude that existing *Code* offences do not effectively encompass serious pollution, and could not be revised to do so in a manner which would highlight the importance of a safe environment; nor could they be revised without diffusing the present goals and purposes of those offences. A separate and newly formulated *Code* offence therefore appears to be justified and needed. Such a course of action may be thought by some to be without precedent anywhere in the world, but that is not in fact the case. A number of jurisdictions have already criminalized and added to their criminal codes new and explicit prohibitions of the most serious instances and forms of environmental pollution. As well, the formulations of those offences contain elements similar to those proposed in this Working Paper. In very summary form we will indicate below the precedents to be found in the United States, Germany, Japan and the Council of Europe.

### A. United States

A new criminal code prohibition incorporating many of the needed elements of a crime against the environment was proposed already in 1971 by the United States National Commission on Reform of Federal Criminal Law.[52] The offence was titled "Release of Destructive Forces." Subsequently the American Law Institute proposed a similar offence for its *Model Penal Code*, an offence titled, "Causing or Risking Catastrophe."[53] Although not exclusively a pollution offence in the strict sense, it does include various forms of pollution conduct in its prohibitions. In effect this offence represents the introduction of a quite new concept into Anglo-American law, that of creating "common dangers." It is a concept based largely on European legislation (namely: Swiss, Danish, German and Soviet).[54] Up to 1980, at least ten American states had enacted or proposed legislation for their criminal codes similar to the "Causing or Risking Catastrophe" section of the *Model Penal Code*. Section 220.2(3)(*a*) provides as follows:

> *Causing or Risking Catastrophe*
>
> (1) *Causing Catastrophe.* A person who causes a catastrophe by explosion, fire, flood, avalanche, collapse of building, release of poison gas, radioactive material or other harmful or destructive force or substance, or by any other means of causing potentially widespread injury or damage, commits a felony of the second degree if he does so purposely or knowingly, or a felony of the third degree if he does so recklessly.

52. U.S. National Commission on Reform of Federal Criminal Law, *Final Report: A Proposed New Federal Criminal Code* (Washington, D.C.: U.S. Government Printing Office, 1971). See section 1704, "Release of Destructive Forces."

53. See American Law Institute, *Model Penal Code and Commentaries* (Philadelphia: ALI, 1980), Part II, vol. I, s. 220.2, p. 35.

54. *Id.*, note 1, p. 36.

(2) *Risking Catastrophe.* A person is guilty of a misdemeanor if he recklessly creates a risk of catastrophe in the employment of fire, explosives or other dangerous means listed in Subsection (1).

(3) *Failure to Prevent Catastrophe.* A person who knowingly or recklessly fails to take reasonable measures to prevent or mitigate a catastrophe commits a misdemeanor if:

(a) he knows that he is under an official, contractual or other legal duty to take such measures; or

(b) he did or assented to the act causing or threatening the catastrophe.

A comment in the *Model Penal Code* following the above section states that the word "catastrophe" means mishaps of "disastrous extent," affecting directly or indirectly the safety or property of many people. It goes on to point out that various states have attempted to be more specific. Maine and Vermont, for example, define "catastrophe" as "death or serious bodily injury to ten or more persons or substantial damage to five or more structures."[55]

While we would not endorse all the elements of the National Commission's proposed offence (for instance, the inclusion of property damage and personal injury in the same prohibition), it does contain many positive features similar to those which have been the focus of this Paper. Among them are the following:

(a) it prohibits the most serious forms of environmental harm and danger;

(b) the language explicitly encompasses pollution activity;

(c) it is generally worded in its formulation, but sufficiently specific to make clear what is encompassed by the offence;

(d) injury to persons is one of the interests in mind and one of the tests of the seriousness of the offence;

(e) it requires a mental element, "knowingly or recklessly" (although we disagree with its noninclusion of "negligently");

(f) it includes within the offence not just causing catastrophe, but also risking and failing to prevent it, thereby explicitly extending the scope of the offence to endangering and to omissions;

(g) it refers to various sources of legal duties beyond and outside the section itself or the *Model Penal Code* (see *Model Penal Code*, section 220.2 (3)(*a*) above).

55. *Ibid.*

## B. Germany

The vast majority of pollution-related offences in Germany are not criminal but administrative in nature.[56] However, the federal government of Germany introduced a Bill in 1978 entitled "An Act to Combat Environmental Criminality," subsequently enacted, comprising a number of new sections to be added to its Criminal Code.[57] Included in the additions are new sections (sections 324 to 329) specifically prohibiting (intentionally or negligently, by act or omission): pollution of water; air and noise pollution; unauthorized removal of hazardous wastes; unauthorized operating of nuclear and other pollution-producing facilities; unauthorized handling of nuclear fuels; endangerment of areas in need of protection. Section 330 is entitled "Grave Endangerment of the Environment," and reads in part as follows:

(1) Whoever,

1. commits an offence under [sections 324-329],
2. without authorization,
   (a) alters the natural composition of the air detrimentally,
   (b) causes considerable noise or vibration in operating a facility,
   (c) releases ionizing radiation,
3. operates a pipeline facility to transport hazardous substances ... without authorization ... or in violation of an enforceable prohibition, regulation or condition issued to prevent harmful environmental effects...,
4. transports, ships, packs, loads or unloads, receives or entrusts to others nuclear fuels, other radioactive substances, explosive substances or other hazardous goods ... without the required authorization or licence or in violation of an enforceable prohibition ... and thereby endangers the life or limbs of another third party, objects of significant value, the public water supply ... shall be punished with a term of imprisonment of three months to five years ....

(2) Whoever,

1. impairs a body of water or soil used for agricultural, forestry or gardening purposes ... or,
2. impairs components of the environment of considerable ecological importance in such way that the impairment cannot be repaired at all, can be repaired only with extreme difficulty or only after a long period, ....

(3) The attempt shall be punishable, ....

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56. See, on the use of criminal law in the environmental context and the relationship of criminal and administrative law regarding pollution offences: Klaus Tiedemann, *Die Neuordnung des Umweltstrafrechts* (The Reorganization of Environmental Law) (New York: Walter de Gruyter, 1980); Ludwig Weber, "The German Ordnungswidrigkeitengesetz," unpublished Paper prepared for the Law Reform Commission of Canada in 1982; Heather Mitchell, "Toxic Crimes: Criminal Law Sanctions for Environmental Offences in Europe, Japan and the United States," unpublished Paper prepared for the Law Reform Commission of Canada in 1984.

57. Bundestags - Drucksache 8/2382 (Lower House Publication 8/2382).

(4) In particularly grave cases the punishment shall be a term of imprisonment from six months to ten years. As a rule, a case is particularly grave if through the offence the offender,

1. endangers the life or limb of a large number of people, or

2. causes the death of or grave injury to a person through carelessness ....

The German criminalization and codification of environmental pollution contains a number of elements similar to those we have emphasized. Among them are these:

(a) it explicitly brings within the scope of criminal law the most serious offences against the environment;

(b) at the same time it depends upon the norms and particulars of environmental statutes in that the conduct must be "without authorization";

(c) although the criminal prohibitions directly protect ecological interests, the gravity of a crime against the environment is largely determined by the degree of harm or risk to human life and health;

(d) it includes not just causing harm, but also endangering;

(e) it provides severe penalties for those convicted, including prison terms.

## C. Japan

Japan, as well, has criminalized serious environmental pollution, and puts a very strong emphasis in these offences on the protection of human health. The title of the relevant legislation is "Law for the Punishment of Crimes Relating to the Environmental Pollution which Adversely Affects the Health of Persons."[58] It reads in part:

*Article 1* (Purpose of this law)

The purpose of this law is to contribute to the prevention of environmental pollution adversely affecting the health of persons, in combination with the control measures based upon other laws or ordinances designed to prevent such pollution, by punishing those acts, etc., which cause such pollution in the conduct of business activities.

*Article 2* (Crime with intent)

1. A person who knowingly endangers the lives or health of the public by discharging those substances which adversely affect the health of persons ... in the conduct of activities of industrial plants or places of business shall be punished with prison labour for not more than three years or a fine not exceeding three million yen.

2. A person who as the result of the offence mentioned in the preceding paragraph caused the death or bodily injury of another shall be punished by imprisonment with prison labour for not more than seven years or a fine not exceeding five million yen.

58. Law No. 142 of 1970.

*Article 3* (Crime by negligence)

1. A person who through failure to exercise necessary care in the operation of his business, endangers the lives or health of the public by discharging those substances which adversely affect the health of persons ... shall be punished by imprisonment with or without prison labour for not more than two years or a fine not exceeding two million yen.

2. A person who, as the result of the offence mentioned in the preceding paragraph, causes the death or bodily injury of another shall be punished by imprisonment with or without prison labour for not more than five years or a fine not exceeding three million yen.

*Article 4* (Concurrent punishment)

In case the representative of a corporation, or the proxy, employee or worker of a corporation or of an individual commits any of the offences mentioned in the preceding two Articles, in connection with the business of the corporation or individual, not only the violator shall be punished but the corporation or individual shall be punished by fines prescribed in the Articles concerned.

The criminalization in Japan of some environmental offences emphasizes a number of points supportive of those we have stressed in this Working Paper:

(a) in prohibiting serious environmental pollution, it gives priority to the protection of the lives and health of the public affected by pollution;

(b) the purpose of the criminalization is expressly that of prevention;

(c) the required mental element is expressly stated to be intent or negligence;

(d) it expressly affirms that the criminal prohibition is to be applied "in combination with the control measures based upon other laws or ordinances ...";

(e) it prohibits both causing harm and endangering;

(f) it provides severe penalties for those convicted, including imprisonment.

## D. Council of Europe

In 1977 the Committee of Ministers of the Council of Europe adopted a resolution entitled "On the Contribution of Criminal Law to the Protection of the Environment."[59] Among the provisions of that resolution are these excerpts supportive of our own concerns in this Working Paper:

The Committee of Ministers,

Considering that various aspects of present-day life, especially industrial development, entail a degree of pollution which is particularly dangerous to the community;

59. Resolution 77(28), "On the Contribution of Criminal Law to the Protection of the Environment," adopted by the Committee of Ministers of the Council of Europe on September 28, 1977, at the 27th meeting of the Ministers' Deputies.

Considering that the health of human beings, animals and plants ... must be protected by all possible means;

Considering that while recourse to the criminal law in this field should be a last resort, nevertheless use must be made of it when other measures are not observed or are ineffective or inadequate;
Considering that it is in the interests of the member states of the Council of Europe to develop a common policy directed towards effective protection of the environment,

...

Recommends [the adoption of] one or more of the measures proposed, .... These measures might be the following:

1. examination of criminal penalties for damage to the environment ...;

...

3. examination of the advisability of criminalising acts and omissions which culpably (intentionally or negligently) expose the life or health of human beings or property of substantial value to potential danger;

...

Draws attention to the advantages which certain member states may derive from gradually compiling in a single collection in particular the criminal provisions relating to environmental protection with a view to:

(a) subsequent consolidation at a national level, e.g. by codification, of the entire legislation on the environment ....

## IV. Conclusions

1. The existing *Code* prohibitions examined do not directly and explicitly prohibit seriously harming or endangering the natural environment. They have as their direct objects quite different conduct and the direct interests in mind are those of property or life and bodily integrity.

2. In principle, one or another of those existing *Code* prohibitions could be revised to accommodate environmental pollution. But given the many considerations specific to crimes against the environment, such revisions would require "major surgery" and result in *Code* sections with too many very different goals. To change existing prohibitions to incorporate the many factors and priorities underlined in this Paper would blunt the present legitimate objects of those offences. At the same time it would make impossible a strong and sharply focused affirmation of the priority criminal law should give to the fundamental value at stake — a safe environment.

3. Environmental quality is a value so fundamental, unique and threatened, that very seriously to harm or endanger it merits express prohibition in a new and distinct offence we have labelled a "crime against the environment." To conclude thusly implies the addition of a third category, "offences against the environment," to the two major categories of offences in the present *Criminal Code*: "offences against persons," and "offences against property."

# CHAPTER THREE

## Recommendations

What follows is a series of recommendations based upon the various analyses and conclusions of this Working Paper. They are formulated in individual and general propositions rather than in the legislative form of a *Code* offence in order to invite comment on the major elements and goals of the new offence being proposed. In our view, it would be premature at this stage of the consultation to draft and propose actual *Code* sections. That drafting awaits the final Report to Parliament on this issue, a Report which will be finalized largely in the light of consultations on this Working Paper.

*A New Offence*

**1. That a new and distinct *Criminal Code* offence be added to the *Code*, that of a "crime against the environment."**

**2. That the role and justification for this offence be that of repudiating and deterring conduct which seriously compromises a fundamental societal value and right, that of a safe environment or the right to a reasonable level of environmental quality.**

**3. That the protection of the environment for its own sake in the absence of identifiable human values, rights or interests, should not be an object of this new *Code* offence.**

**4. That this new offence should be formulated in general terms as regards substances, contaminants, emission standards and range of activities which fall within its scope, not limiting its present and future applicability by excessive specificity and detail.**

5. That the general range of activities which *Code* offences against the environment should expressly prohibit would be conduct which seriously damages or endangers the environment:

(a) by means of direct physical acts; or

(b) in the course of the manufacture, transportation, use, storage or disposal of any hazardous or potentially hazardous goods, wastes or other contaminants.

6. That the scope of the offences against the environment should extend to:

(a) environmental pollution which

(i) seriously and directly damages the quality of the environment, or

(ii) seriously and directly endangers the quality of the environment;

(b) in either case listed in (a), unauthorized conduct, normally involving as a necessary condition a serious and dramatic breach of a federal or provincial statutory prohibition or standard;

(c) in either case listed in (a), conduct for which there is no overriding social utility which could result in otherwise seriously harmful or endangering pollution being minor in nature or even tolerable and justifiable;

(d) especially environmental pollution which thereby seriously harms or endangers human life or health;

(e) not only immediate and known harms and dangers to human life and health, but also those which are likely to result in the foreseeable future;

(f) only by express exception, that environmental pollution which deprives others of the use and enjoyment of one or more elements of the natural environment, causing very serious consequences although resulting in no serious harm or danger to human life or health; such instances would be in the nature of "catastrophes," an example being the loss of livelihood of an entire community as a result of pollution.

Excluded from the scope of this offence should be environmental pollution which damages, destroys or endangers private property, without harming or endangering human life and health.

*The Mental Element*

7. That the mental element required for a crime against the environment should be intention, recklessness or negligence.

8. That the degree of negligence required for criminal liability should be that which falls well below the standard of reasonable care required for ordinary or civil negligence.

**9. Whereas intentional or reckless pollution could by exception incur criminal liability under this new *Code* offence even in the absence of harm or danger to human health, negligently harming or endangering the environment should only incur such liability if the pollution causes or risks death or bodily injury.**

*Omissions*

**10. That *Criminal Code* offences against the environment should prohibit not only acts which seriously harm or endanger the environment, but also harmful or endangering omissions.**

**11. That omissions should be included in these *Code* prohibitions by means of a specific duty to take reasonable care to prevent or mitigate grave environmental damage, destruction or danger when one has created the danger or has control over it.**

**12. That the greater the dependence of the public and the greater the dangers to the environment and health created by the activities of individuals or groups, the stricter and more onerous should be their duty to ensure environmental safety.**

**13. That for this offence, the "duties imposed by law," the omission of which could incur criminal liability, should consist both of the duties attached to the specific *Code* offences, and the duties imposed by federal and provincial environmental statutes; the flagrant and dramatic violation of the latter duties would be a necessary condition of criminal liability for omission.**

*Proving the Offence*

**14. That procedural reforms such as reverse onus or prosecutorial discovery of the accused may not be justified for these offences since they may violate the rights of the accused; nor would such reforms be necessary for the successful prosecution of at least the most serious and flagrant environmental offences, despite technical complexities, scientific debates and the problems and burden of proof.**

*Using the Jury*

**15. That the jury trial may well be the ideal and normal vehicle for determining whether or not an accused's pollution of the environment was so gross, so far beyond what was authorized, and so lacking in social utility relative to the harm caused or risked, that it merits repudiation as a crime against the environment.**

**16.** That if the jury trial becomes the normal form for prosecutions under this new *Code* offence:

(a) the accused would have a right to a jury trial, and the Crown would be able to require a jury trial even when an accused elects to be tried by a judge alone;

(b) only in the event that both the accused elects and the Crown consents to trial by judge alone would a jury not be involved.

# APPENDIX I

## Relevant Law Reform Commission of Canada Papers

### I. Reports to Parliament

— *Our Criminal Law*, Report 3, 1976
— *The Jury*, Report 16, 1982
— *Disclosure by the Prosecution*, Report 22, 1984

### II. Working Papers

— *The Meaning of Guilt: Strict Liability*, Working Paper 2, 1974
— *Discovery*, Working Paper 4, 1974
— *Limits of Criminal Law: Obscenity: A Test Case*, Working Paper 10, 1975
— *Criminal Responsibility for Group Action*, Working Paper 16, 1975
— *The Jury in Criminal Trials*, Working Paper 27, 1980
— *The General Part: Liability and Defences*, Working Paper 29, 1982
— *Damage to Property: Vandalism*, Working Paper 31, 1984
— "Omissions, Negligence and Endangering," draft Working Paper in progress, 1985

### III. Published Protection of Life Series Study Papers

— T.F. Schrecker, *Political Economy of Environmental Hazards*, 1984
— J.Z. Swaigen and G. Bunt, *Sentencing in Environmental Cases*, 1985

### IV. Unpublished Protection of Life Series Background Papers

[Available for consultation in the Commission library, 8th Floor, 130 Albert St., Ottawa]

— B. Freedman, "Toward Consensus in Regulating Risks in Society: A Study of Issues and Methods," 1983

— S. Tanner, ''Selected Environmental Statutes,'' 1984
— H. Mitchell, ''Toxic Crimes: Criminal Law Sanctions for Environmental Offences in Europe, Japan and the United States,'' 1984
— M.E. Hatherly, ''Constitutional Jurisdiction in Relation to Environmental Law,'' 1984

## V. Protection of Life Project Working Papers in Progress

— ''Policing Pollution: The Enforcement of Environmental Legislation''
— ''Workplace Pollution''
— ''Consumer Product Pollution''

# APPENDIX II

## Partial List of Those Consulted

By reading and commenting on earlier drafts, or in other ways, those listed below were of great assistance to the Commission in formulating the analyses and tentative recommendations of this Working Paper. We are very grateful to them for the time and effort they freely donated.

Those consulted and identified below do not necessarily agree with all the positions adopted in this Paper. Those named were consulted in their private capacity, not as representatives of their employers or other groups to which they may belong.

Judge R.M. Bourassa, Territorial Court, Yellowknife, N.W.T.

Mr. J. Castrilli, Barrister and Solicitor, Toronto

Mr. S. Cohen, Department of Justice, Ottawa

Mr. G.M. Cornwall, Environment Canada, Ottawa

Mr. A. Crerar, Environment Council of Alberta

Ms. L. Duncan, Environmental Law Centre, Alberta

Prof. P. Elder, Faculty of Environmental Design, University of Calgary

Prof. R. Franson, Faculty of Law, University of British Columbia

Mr. B. Free, Environment Council of Alberta

Dr. B. Freedman, Westminster Institute for Ethics and Human Values, London, Ontario

Mr. M. Frost, Environmental Council, Canadian Pulp and Paper Association, Montréal

Mr. N. Gwyn, Federal Statutes Compliance Project, Ottawa

Mr. I.W.E. Harris, Polysar Ltd., Sarnia, Ontario

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Mr. P.M. Higgins, Environment Canada, Ottawa

Mr. R.B. Hyslop, Department of Justice, Newfoundland

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Ms. M. Kansky, West Coast Environmental Law Association, Vancouver

Dr. E. Levy, Department of Philosophy, University of British Columbia

Mr. J. Lilley, Environment Council of Alberta

Mr. J. MacLatchy, Environment Canada, Ottawa

Ms. L. McCaffrey, Q.C., Ministry of the Environment, Ontario

Ms. B. McGregor, Saskatchewan Environment, Regina

Prof. J. McLaren, Faculty of Law, University of Calgary

Ms. H. Mitchell, Barrister and Solicitor, Toronto

Mr. D. Montgomery, Canadian Manufacturers' Association, Ottawa

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Prof. M. Rankin, Faculty of Law, University of Victoria

Mr. F. Reilly, Senior Legal Officer, INCO Ltd., Toronto

Mr. C.D. Robertson, Federal Environmental Assessment Review Office, Ottawa

Mr. T. Schrecker, Consultant, Peterborough, Ontario

Ms. C. Starrs, Environment Canada, Ottawa

Mr. J.Z. Swaigen, Ministry of the Environment, Ontario

Ms. S. Tanner, Transport Canada, Ottawa

Prof. D. Thompson, Faculty of Environmental Design, University of Calgary

Prof. K. Tiedemann, University of Freiburg, Germany

Prof. H. Versteeg, Faculty of Law, University of New Brunswick

Ms. T. Vigod, Canadian Environmental Law Association, Toronto

The preceding list does not include the names of the five consultation groups established to consider the Commission's criminal law Working Papers and Reports, groups with whom we meet on a regular and continuing basis. The five groups are comprised of: judges; defence lawyers nominated by the Canadian Bar Association; law teachers selected by the Canadian Association of Law Teachers; representatives of the Attorneys General or Justice Departments of the federal and provincial governments; and a group of chiefs of police. They too were most helpful and constructive in their advice. The names of the members of these groups are provided in the Commission's Annual Reports.